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ANNA UNIVERSITY

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News Bulletin

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> *"Courage is the discovery that you may not win, and trying when you know you can lose."*
>
> *— Tom Krause*

EDITORIAL COMMITTEE

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Co-ordinator, Anna University News Bulletin

P34275

PUBLICATION

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Department of Media Science

FROM THE VICE - CHANCELLOR'S DESK

There have been giant leaps in Science and Technology in the past two decades. The Government of Tamil Nadu has initiated the process of drafting a new policy to reflect these changes. The State Council responsible for the task has constituted a Vision Council to formulate the first draft for the new Science and Technology policy, which is to be released next year. The Vision Council is currently in the process of collecting proposals and ideas to be included in the new policy. The Council has decided to give major focus in the areas of energy, health, agriculture and environment. The policy is expected to outline ways in which Science and Technology interventions can improve the economic development of the State and develop strategies to generate scientific manpower. The policy will also promote scientific management of the State's natural resources. Apart from scripting the draft policy, the Vision Council will be responsible for envisioning the State's scientific requirements in the long term, i.e in the next fifteen years.

In the business front, there is an economic slowdown and this seems to have penetrated all spheres of the business and education. There is a general slump in the recruitment of students. The students are also feeling the brunt of this pressure on the industry.

In this backdrop, our students should be trained in such a manner that industry specific skills are ingrained in them. The students have to become proactive, get trained even during their course of study and become tech savvy in upcoming fields rather than wait to join the industry and get trained. In the IT industry today, Infrastructure Management, Enterprise Resource Planning (ERP) and Software Engineering are some of the major areas in which students should acquire skills in order to be employable. This is an opportune moment for students to gain management skills. Education is not just confined to classroom learning, studying from text books and writing examinations. The students must read voraciously enrich their knowledge and expand their horizons.

Anna University is committed to provide excellent and effective engineering education with a traditional Indian orientation for enhancing the technical skills, professional values, analytical skills and ethical standards of the student community. It is also dedicated to the mission of empowering teachers with up-to-date knowledge and age-old wisdom for equipping students with life skills and making them more employable, which will richly contribute to the prosperity of the nation in all spheres.

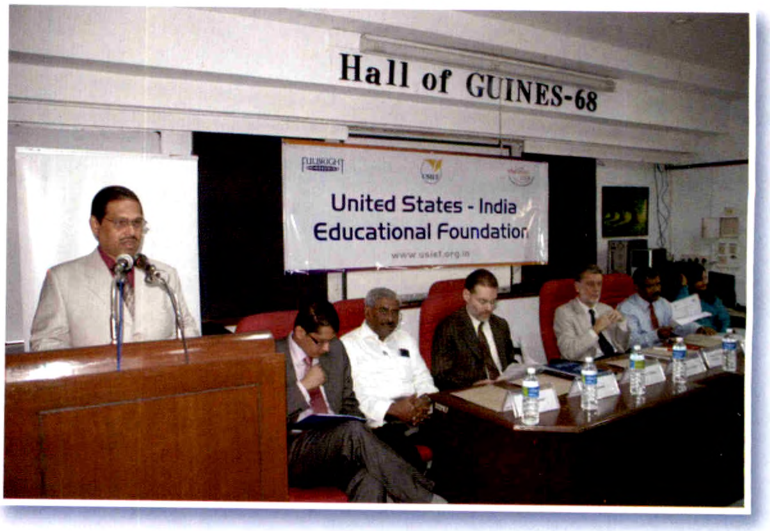
I solicit your kind co-operation in creating new dimension into the field of higher education, imparting education of the highest quality to our student community, and in turn serving the society and the nation as a whole.

(Dr.P. Mannar Jawahar)
Vice Chancellor

VICE CHANCELLOR'S PROGRAMMES

Dr.P.Mannar Jawahar,
Vice-Chancellor,
Anna University Chennai inaugurated
an Awareness Seminar on
Scientific Natural Resource
Development for School Students
on 19th November 2008

Dr.P.Mannar Jawahar,
Vice-Chancellor,
Anna University Chennai inaugurated
the International Education Week
on 20th November 2008



"Seminar on
Dedicated to the Year of Russia in Indi
November 20, 2008
re for Biotechnology
na University- Chennai
: Raman Auditorium, A.C. College

Dr.P.Mannar Jawahar,
Vice-Chancellor,
Anna University Chennai inaugurated
Indo-Russian Seminar on
Biotechnology on
20th November 2008

DURING NOVEMBER – DECEMBER 2008

Dr.P.Mannar Jawahar,
Vice-Chancellor,
Anna University Chennai inaugurated the seminar on Employment Opportunities in Open Source Software on 29th November 2008

Dr.P.Mannar Jawahar,
Vice-Chancellor,
Anna University Chennai distributed TCS Best Student Award on 28th November 2008

INDUSTRY MEET
ON
NANOSCIENCE AND TECHNOLOGY
29th NOVEMBER 2008
RAMAN AUDITORIUM, A.C.TECH. CAMPUS
ORGANISED BY
CENTRE FOR NANOSCIENCE AND TECHN
&
CENTRE FOR TECHNOLOGY DEVELOPMENT AND TRA
ANNA UNIVERSITY CHENNAI
NANO 2008

Dr.P.Mannar Jawahar,
Vice-Chancellor,
Anna University Chennai inaugurated an Industry meet on Nanoscience and Technology on 29th November 2008

on Sequence Analysis and
Molecular Simulation
10th – 13th December, 2008
Sponsored by
Biotechnology, Govt. of India, New Delhi.

Dr.P.Mannar Jawahar,
Vice-Chancellor,
Anna University Chennai inaugurated
a workshop on Sequence Analysis
and Molecular Simulation
on 10th December 2008

Dr.P.Mannar Jawahar,
Vice-Chancellor,
Anna University Chennai inaugurated
the 16th International Conference
on Advanced Computing and
Communications 2008 (ADCOM
2008) on 14th December 2008

Quotes from Albert Einstein

Peace cannot be kept by force. It can only be achieved by understanding.

Not everything that counts can be counted, and not everything that can be counted counts.

A person starts to live when he can live outside himself.

SPONSORED PROJECTS

S.No.	Name of Coordinator(s)	Title of the Project	Funding Agency	Amount Sanctioned (Rs. in lakhs)	Duration (years)
DEPARTMENT OF CHEMICAL ENGINEERING					
1.	Sivakumar.T	Biofuel production by catalytic cracking of jatropha oil over intelligent catalysts	DARL	9.99	2
DEPARTMENT OF GEOLOGY					
2.	Hema Achyuthan	North-east monsoon variability and late quaternary evolution of the continental shelf and coast of Tamil Nadu (Chennai to Cuddalore): micro-faunal and sedimentological approach	ISRO	44.72	3
DEPARTMENT OF MANAGEMENT STUDIES					
3.	Suganthi.L Iniyan.S	Technical and economic assessment of improved solar photovoltaic linear concentrators and determination of market potential in India	DST	46.36	2
CENTRE FOR BIOTECHNOLOGY					
4.	Gautam.P	Macromolecular Engineering and Design	DBT	144.40	5
5.	Meenakshi Sundaram.S	Upscaling the enzyme production for commercial level trials	CLRI	2.40	1
6.	Kaliraj.P	Genetic polymorphism of wouchreia bancrofti parasitic Gene	ICMR	7.41	6 months
CENTRE FOR ENVIRONMENTAL STUDIES					
7.	Thanasekaran.K	Improvement of drinking water quality from surface water ponds by applying zero energy technologies	MRD	19.55	2
INSTITUTE OF REMOTE SENSING					
8.	Ramalingam.M	Flood risk mapping of Chennai city and comprehensive study through modelling to propose possible flood mitigation measures	DST GOTN	60.00 157.00 217.00	1

CONFERENCES / SEMINARS / SYMPOSIA / WORKSHOPS / FACULTY DEVELOPMENT PROGRAMMES / TRAINING PROGRAMMES ORGANIZED

INTERNATIONAL

DEPARTMENT OF INFORMATION TECHNOLOGY

Sixteenth International Conference on "Advanced Computing and Communications (ADCOM 2008)" from 14th to 17th December 2008, co-ordinated by **Thamaraiselvi. S**.

DEPARTMENT OF INSTRUMENTATION ENGINEERING

Sixth International Conference on "Trends in Industrial Measurements and Automation (TIMA 2009)" from 4th to 6th January 2009, co-ordinated by **Thyagarajan.T**.

NATIONAL

CENTRE FOR BIOTECHNOLOGY

Indo-Russian Seminar on "Biotechnology" on 20th November 2008, co-ordinated by **Kaliraj.P** and **Baskar.K**.

Workshop on "Sequence Analysis and Molecular Simulation" on 13th December 2008, co-ordinated by **Sharmila Anishetty** and **Kothai.T**.

INSTITUTE OF REMOTE SENSING

Seminar on "Scientific Natural Resource Development" for school students during the National Land Resources Conservation Week from 14th to 20th November 2008.

FORTHCOMING EVENTS

DEPARTMENT OF ENGLISH

National Seminar on "**English and Communication Skills for Employability**" on 25th & 26th March 2009.

Contact : Dr. S.P. Dhanavel,
Professor and Head,
Department of English
Anna University Chennai, Chennai - 600 025
Phone : 044 – 22203165/64
email : au.english@gmail.com

AFFILIATING CENTRES

NSS

Dr. S. Selladurai, Co-ordinator, NSS AUC, is awarded for his outstanding Service thro NSS by Thiru.T.P.M. Mohideen Khan, Hon'ble Minister for Environment and Sports & Youth Welfare, Government of Tamilnadu.

NSS Cell Anna University Chennai and UNICEF jointly organized a Training Programme on "Role of NSS in Promoting Sustainable Sanitation" on 6th December 2008.

Dhanalakshmi Srinivasan College of Engineering and Technology

Tree Plantation Programme was organized on 15th November 2008.

Mass Conducts Cleaning Programme was organized at Mamallapuram on 22nd November 2008

GOVERNMENT AND AFFILIATED COLLEGES

FACULTY

SPONSORED PROJECTS

S.No.	Name of Coordinator(s)	Title of the Project	Funding Agency	Amount Sanctioned (Rs. in lakhs)	Duration (years)
ADHIPARASAKTHI ENGINEERING COLLEGE					
1.	Jayashri.S	Modernization of VLSI design and embedded system lab	AICTE	9.50	9 months
2.	Ramasamy.V	Modernization of structural and concrete testing laboratory	AICTE	10.00	1
MEPCO SCHLENK ENGINEERING COLLEGE					
3.	Arivazhagan.S	Modernization of Image Processing and Multimedia Laboratory	AICTE	7.00	1

PAPER PRESENTATIONS

INTERNATIONAL CONFERENCES / SEMINARS / SYMPOSIA / WORKSHOPS

K.S.RANGASAMY COLLEGE OF TECHNOLOGY

Ramani.K, "A novel scheme of unify flux and torque control method for direct torque control algorithm based induction motor", Conference on Power Con 2008, conducted by Indian Institute of Technology, New Delhi, from 12th to 15th October 2008.

SACS M.A.V.M.M. ENGINEERING COLLEGE

Pal Pandi.A, "Visionary leadership in higher education", Seminar on Global Management Challenges, conducted by Nandha Engineering College, Erode, on 17th October 2008.

PAPER PUBLICATIONS IN JOURNALS

MEPCO SCHLENK ENGINEERING COLLEGE

Marikani.A (2008), "Synthesis and characterization of calcium phosphate based bioactive quaternary P_2O_5-CaO-Na_2O-K_2O glasses", Journal of Non-Crystalline Solids, Vol.354, pp 3929-3934.

VEL HIGH TECH SRI RANGARAJAN SAKUNTHALA ENGINEERING COLLEGE

Singh.E.B (2008), "Measures to avert internal corrosive deposits of high pressure steam evaporation zone", Feedback Technical Journal published by BHEL, Navarathna Public Undertaking Company of Government of India, Vol.33, No.3, pp 27-32.

Kannan.E (2008), "On Huffman decoding: A parallel algorithm on a linear array with reconfigurable pipelined bus system", Journal of Computer Mathematical Science and Applications, Vol.3, No.1, pp 99-106.

CONFERENCES / SEMINARS / SYMPOSIA / WORKSHOPS / FACULTY DEVELOPMENT PROGRAMMES / TRAINING PROGRAMMES ORGANIZED

NATIONAL

ERODE SENGUNTHAR ENGINEERING COLLEGE

Technical Symposium "ECLAT 2008" on 3rd October 2008, co-ordinated by **Nagasundari.S**.

Technical Symposium "GAZEBO 2008" on 6th October 2008, co-ordinated by **Ganesan.P**.

Technical Symposium "ZEALICHE 2008" on 7th October 2008, co-ordinated by **Prince Emmanuel.V**.

NATIONAL ENGINEERING COLLEGE

Seminar "Recent Trends in Real-time Video-Data Analysis and Processing" on 14th & 15th November 2008, co-ordinated by **Gomathi.V**.

SKR ENGINEERING COLLEGE

Technical Symposium "CODE '08" on 6th October 2008, co-ordinated by **Nanda Kumar.S.M**.

BOOK PUBLICATIONS

MEPCO SCHLENK ENGINEERING COLLEGE

Rajamani.K, "Technical English – I", 2008, published by Virutcham Publications, Nagercoil.

ST. JOSEPH'S COLLEGE OF ENGINEERING AND TECHNOLOGY

Swaminathan.A.K, "Object Oriented Programming with C++", 2008, published by Aruna Publications, Gandarvakkottai.

STUDENTS

PAPER PRESENTATIONS

ERODE SENGUNTHAR ENGINEERING COLLEGE

Siva Kumar.V and Mohanraj.S, "Global Environment", International Seminar on Global Environmental Management Challenges, conducted by Nandha Engineering College, Erode, on 17th October 2008.

Poorani.P and Preethi.S, "Transitional Role of Women", International Seminar on Global Environmental Management Challenges, conducted by Nandha Engineering College, Erode, on 17th October 2008.

IFET COLLEGE OF ENGINEERING

Anusuya.S and Deepika.R, "VLSI Technology", National Level Students Technical Symposium 2008, conducted by Gnanamani College of Technology, Rasipuram, on 3rd October 2008.

Aarthi.S and Jonsirani.A, "3G-Wireless Communication", National Level Students Technical Symposium 2008, conducted by Gnanamani College of Technology, Rasipuram, on 3rd October 2008.

Srividya.M and Renuka.R, "Image Processing", National Level Students Technical Symposium 2008, conducted by Sona College of Engineering, Salem, on 3rd October 2008.

Anusha.R and Nargis.J, "Mobile Communication", National Level Students Technical Symposium 2008, conducted by Gnanamani College of Technology, Rasipuram, on 3rd October 2008.

Abinaya.N and Aarthi.B, "Mobile Communication", National Level Students Technical Symposium 2008, conducted by Sona College of Engineering, Salem, on 4th October 2008.

Megala.R and Karthigeyan.M, "Wireless Communications", National Level Students Technical Symposium 2008, conducted by Sona College of Engineering, Salem, on 4th October 2008.

Srividya.M and Renuka.R, "Network Security", National Level Students Technical Symposium 2008, conducted by Sona College of Engineering, Salem, on 4th October 2008.

Anusha.R and Yasodha.R, "Biomedical Applications", National Level Students Technical Symposium 2008, conducted by Sona College of Engineering, Salem, on 4th October 2008.

Kalaimagal Nithya.A and Deena.P.V, "Biotronics", National Level Students Technical Symposium 2008, conducted by Sona College of Engineering, Salem, on 4th October 2008.

Sethuraman.S and Srinath.B, "Image Processing", National Level Students Technical Symposium 2008, conducted by Sona College of Engineering, Salem, on 4th October 2008.

Siva Sankaran.S and Vinothkumar.J, "Embedded Systems", National Level Students Technical Symposium 2008, conducted by Sona College of Engineering, Salem, on 4th October 2008.

Suresh Kumar.R and Vinothkumar.S, "Wireless Communications", National Level Students Technical Symposium 2008, conducted by Sona College of Engineering, Salem, on 4th October 2008.

Mahalakshmi.R and Keerthiga.A, "Wireless Communications, National Level Students Technical Symposium 2008, conducted by Sona College of Engineering, Salem, on 4th October 2008.

Anusha.R and Padmathilagam.R, "Nano Robotics", National Level Students Technical Symposium 2008, conducted by Sona College of Engineering, Salem, on 4th October 2008.

SPORTS

ADHIPARASAKTHI ENGINEERING COLLEGE

Babu.S won Gold Medal in Boxing "Light Weight Category" in Interzonal tournament conducted by Anna University at Valliammai Engineering College from 1st to 3rd November 2008.

NSS

KINGS COLLEGE OF ENGINEERING

Conducted Eye Camp in association with Govindarajan Eye Hospital, Trichy on 23rd November 2008.

Organized "Aids Awareness Rally" in Thanjavur on World AIDS Awareness Day on 1st December 2008.

SKR ENGINEERING COLLEGE

Red Ribbon Club organized "Peer Leader's Training Programme" on 12th November 2008.

MISCELLANEOUS

MEMORANDUM OF UNDERSTANDING

THIRUMALAI ENGINEERING COLLEGE

Signed an MoU with M/s. Pentacad, Chennai on 3rd October 2008 for placement, training and research for the benefit of Engineering and MBA Students.

NGINEERING C
Right place to E ch

FORTHCOMING EVENTS

NATIONAL ENGINEERING COLLEGE

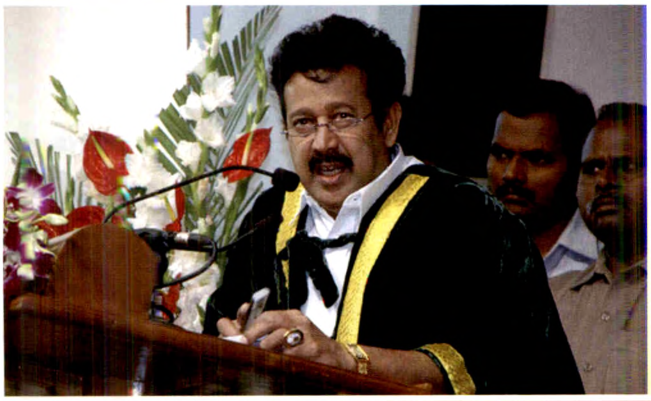
Third National Conference "Recent Trends in Instrumentation Applications (RETINA '09)" on 19th & 20th March 2009 at National Engineering College, Kovilpatti.

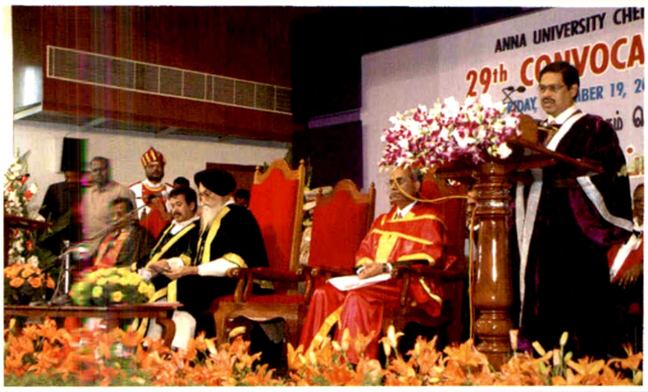
Contact Address : Mr.A.Abudhahir
Convenor-RETINA '09
Assistant Professor,
Department of Electronics & Instrumentation Engineering,
National Engineering College,
Kovilpatti, Tamil Nadu
Web site : www.nec.edu.in
Ph: 04632-222502, 230227

29th CONVOCATION OF

ANNA UNIVERSITY

CHENNAI on 19th December 2008





PROGRESS THROUGH KNOWLEDGE
NA UNIVERSITY CHENNAI
19, 20

PROGRESS THROUGH
NA UNIVERSITY CHENNAI

Industry Meet on Nanoscience and Technology

The Centre for Nanoscience and Technology in coordination with the Centre for Technology Development and Transfer conducted an Industry Meet on 29th November 2008. About 15 industries had participated in the meet and shared their ideas and interest in R & D activities in Nanoscience and Technology. The Industry meet was inaugurated by Dr.Mysood Akhtar, President, Global Applied Materials, U.S.A. Prof. Dr. P. Mannar Jawahar presided over the inaugural function.

Visitors to the Centre for Nanoscience and Technology during Nov.-Dec.-2008.

1. Dr.Stefano Prato, Science Park, Trieste, Italy visited the Centre on 20.11.2008 and had discussions on the Recent Trends in Scanning Probe Microscopy.
2. Dr.G.Bhagavannarayana, National Physical Laboratory, New Delhi, visited on 5th December 2008 and had discussions on the High Resolution X-ray Diffraction Studies of Nanocrystalline materials.
3. Prof. Anne Milet and Dr. Minassian Frederic, Department of Molecular Chemistry, University of Joseph Fourier, France visited the Centre on 10th December 2008 and had discussions for collaborative research.
4. Dr.U.Balachandran, Argonne National Laboratory, U.S.A. visited the Centre of 18th December 2008 and delivered a lecture on the Development of Nanomaterials for Solid Oxide Fuel Cell Applications.

ON
NANOSCIENCE AND TECHNOLOGY
2008
RAMAN AUDI CAMPUS
CENTRE FOR NANO AND TECHNOL
&
CENTRE FOR TECHNOL VELOPMENT AND T
ANNA U

Dr.R.Jayavel, Director-in-charge, Centre for Nanoscience and Technology Honoring the Vice Chancellor Prof. Dr.P. Mannar Jawahar during the inauguration of the Industry Meet organized by the Centre on 29th November 2008.

DEPARTMENT OF INFORMATION TECHNOLOGY
MIT CAMPUS, ANNA UNIVERSITY CHENNAI

ADCOM 2008 is a renowned international conference on advanced computing and communication organized annually by Advanced Computing and Communication Society (ACS), Bangalore in collaboration with one educational institution in India. The sixteenth edition of ADCOM (ADCOM 2008) is hosted by the Department of Information Technology, MIT Campus of Anna University Chennai during 14-17 Dec.2008 along with IEEE Madras section. The conference is aimed at bringing together the world's top research and academic people for discussion on the recent trends in the field of advanced computing.

ACS is a registered society in Bangalore founded to provide a discussion forum for individuals and institutions in the view of promoting advanced computing and communication technologies.

The ADCOM 2008 Inauguration was presided by our Honourable Vice-Chancellor, Anna University Chennai **Dr.P.Mannar Jawahar** on 14th December 2008. **Dr.M.Annadurai,** Project Director, Chandrayan-1&2, ISRO, Bangalore inaugurated the function followed by a keynote speech by Dr.S.V.Raghavan, Professor, Department of Computer Science and Engineering, Indian Institute of Technology, Chennai. The function was felicitated by Dr.K.Rajan, Vice president ACS, Dr.S.Shanmugavel, Registrar, Anna University Chennai. And Dr. V.Murugesan, Director, Centre for Research, Anna University Chennai.

A pre-conference tutorial on the first day focusing on new research challenges and initiatives is conducted by eminent personalities **Dr.Rajkumar Buyya,** Associate Professor, The University of Melbourne, Australia and **Dr.S.Thamarai Selvi,** Professor, Department of Information Technology, Anna University, Chennai.

The conference includes keynote talks by **Dr.Ruppa K.Thulasiram,** University of Manitoba, Canada, **Dr.Manish Parashar**, Rutgers University, USA and **Dr.Krithi Ramamritham,** IIT Mumbai, India.

There were 12 technical reviews on Enterprise Computing Grid Computing, Mobile Computing, Pervasive Computing, Soft Computing, High Performance Computing, Enterprise Computing, Web services and Database Management Systems, Applications in Science & Engineering, having around 70 papers presented. The best paper awards to deserving candidates were given for the top 3 papers. The extended version of the selected top ranked papers are called for publication in the International Journal of Parallel, Emergent and Distributed Systems.

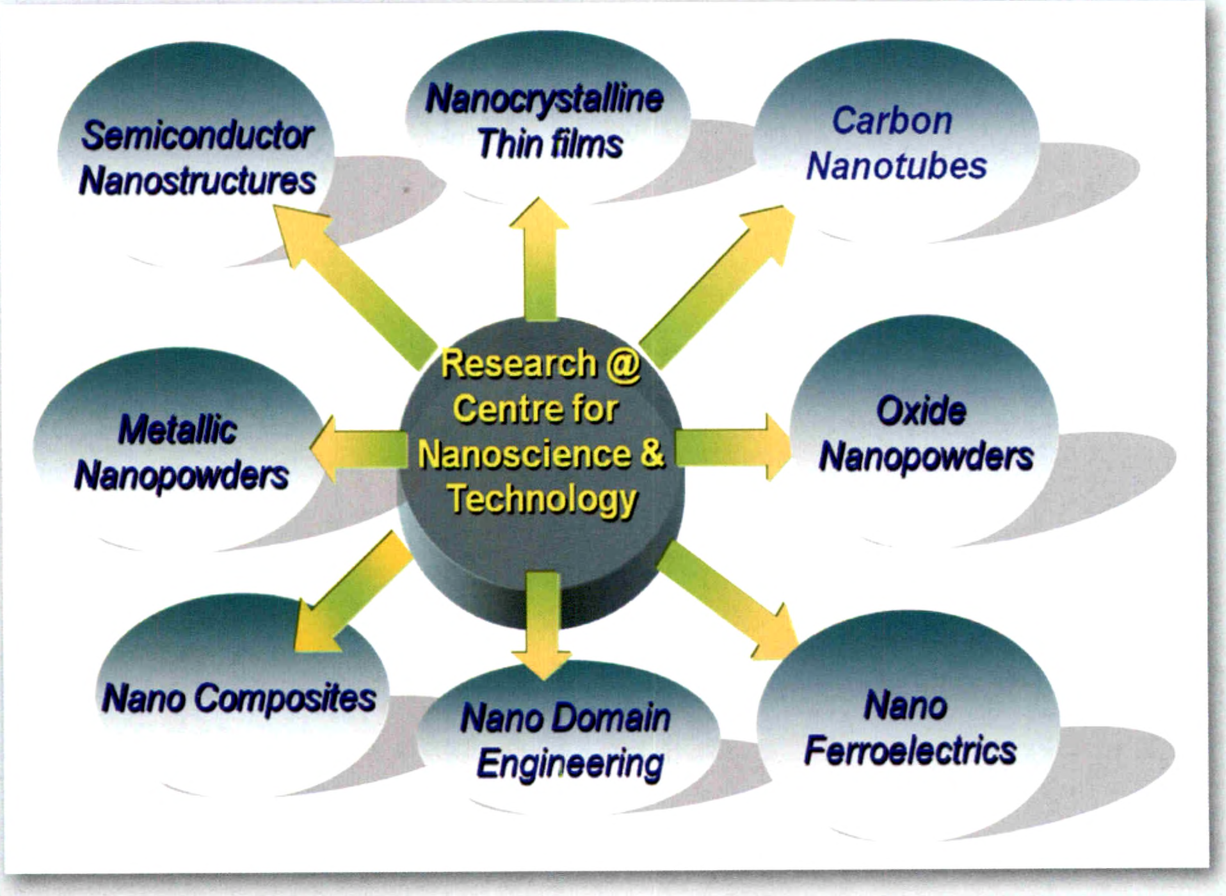
We are fortunate to have **Dr.N.Balakrishnan** Associate Director, IISc Bangalore being awarded with CDAC-ACS foundation lecture award as the chief guest for the valedictory function.

All the selected papers in the conference are accessible through IEEExplore. The conference was co-sponsored by DST, UGC, CDAC, DRDO and CSIR, financially supported by a few more Engineering Colleges.

RESEARCH CENTERS OF EXCELLENCE

CENTRE FOR NANOSCIENCE AND TECHNOLOGY

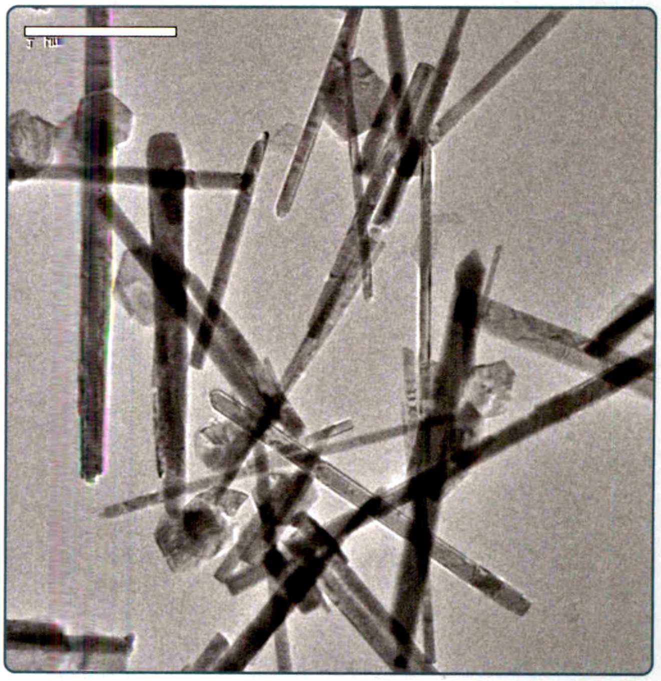
The Centre for Nanoscience and Technology was established at Anna University in 2005. The centre is focusing on various research aspects of Nanoscience and Technology. The focused activities of the Centre include research in thrust areas of Nanoscience and Technology, Training and Extension activities and Academic program (M.Tech.- Nanoscience and Technology). The Centre has been actively pursuing research in several areas of Nanoscience and Technology including I-VI semiconductor nanostructures for solid state lighting applications, nanocrystalline thin films for sensor applications, Carbon and other inorganic nanotubes, nanodomain engineering, polymer based nanocomposites, nanostructure ferroic materials, etc.



The Centre has Nano Materials Synthesis facilities like High temperature furnaces, Microwave furnaces, Planetary Mill, Chemical synthesis and Materials processing facilities like Spin Coating Unit, Spray Pyrolysis, Chemical bath Deposition, etc. The Centre will soon have characterization facilities like X-ray Diffractometer, Scanning Electron Microscope AFM/STM, Particle Size Analyser, UV-Vis Spectrometer, Fluorescence spectrometer, Electrochemical Workstation, etc.

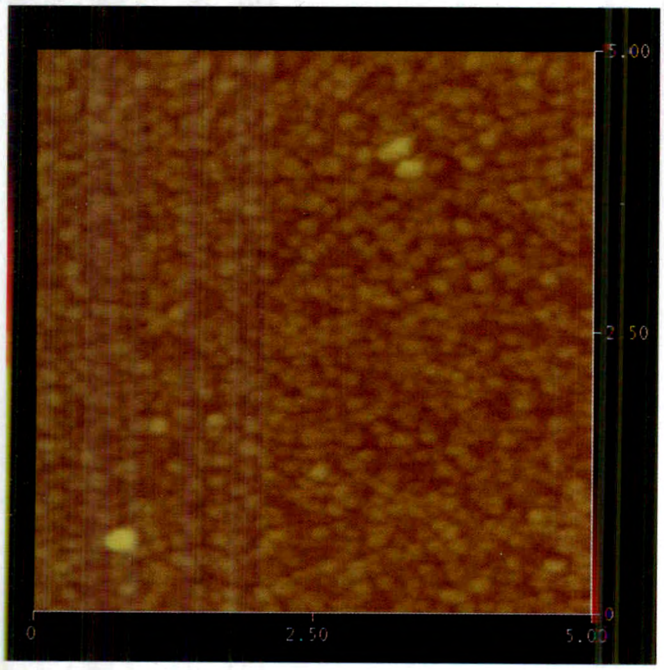
Semiconductor nanomaterials of II - VI compounds and Chalcogenides have been prepared by sol-gel technique. The preparation conditions, structural and luminescent properties have been optimized for use of these materials for light emitting and sensor applications. Thin film nanostructures of transparent conducting oxides have been prepared for photocatalytic, sensor and Spintronics applications.

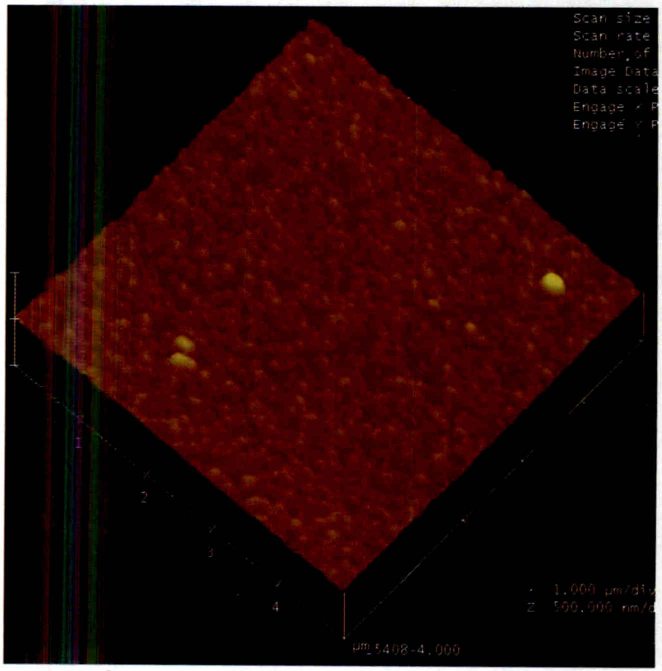
Materials Synthesis Laboratory



Transmission Electron Microsocopy image of ZnO Nanorods

Zinc Oxide nanorods and nanowires have been prepared by hydrothermal and aqueous chemical route methods. The particle sizes of the structures were calculated to be around 40nm. The effect of transition metals and rare earth group compounds on the synthesis and properties has been studied. The optical and structural properties of these materials for photo catalysis, photo degradation and light emitting applications have also been studied.





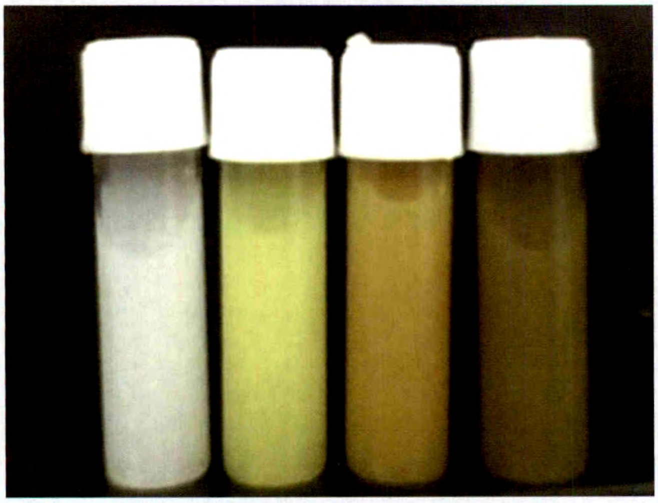
P 34275

Atomic Force Microscopic image of ZnO nano crystalline thin films coated in the Silicon substrate with different temperatures by Home made Spray pyrolysis technique for energy related applications such as short wavelength light emitting diodes and gas sensors have also been developed.

Electronic grade Nanoglass material for high reliability electronics have been prepared by melt-quenching and grinding method. Collaborative work is being carried out with an industry for use of this nanoglass material for microelectronic packaging application. Nanodomain engineering in ferroelectric crystals is being carried out for noval optical device applications.

Nanocrystalline thin films have been prepared by sol-gel-spin on technique. Nanomaterials of CdO and CdS have been synthesized by wet chemical route with the particle size of about 30 nm. These materials are useful for LED and sensor applications. Nanocrystalline thin films have also been prepared by Chemical Bath Deposition and dip coating technique.

Materials Processing Facilities



Pure ZnS (White), PVP capped CdS (greenish yellow), Pure CdS (reddish yellow), Mn:CdS (Brown)

Pure CdS (yellow), Hg:CdS (Green), Ag:CdS (dark green)

Department of Mathematics

Anna University Chennai

Ramanujan Endowment Lecture

The Ramanujan Endowment Lecture was instituted by Anna University Chennai in the year 1987, the birth centenary year of the renowned Indian Mathematician Sri Srinivasa Ramanujan. This year, the Twentieth Ramanujan Endowment Lecture was delivered by Dr. S.V.Raghavan, Professor, Department of Computer Science and Engineering, I.I.T. Madras, on 22nd December 2008, the birth anniversary day of Sri Ramanujan. Professor Raghavan who is also the Chairman of Technical Advisory Committee, National Knowledge Network, Government of India spoke on the topic "Emerging Mathematical Modeling Challenges in Computer Science" and gave a holistic view of the challenges in Computer Science. The various aspects in this area from understanding of image and pattern recognition to designing operational systems and to managing resources were dwelt in detail. The different steps involved in a general system such as collection of raw data, preprocessing, training, modeling and testing were also emphasised in detail and the netwoks in real time with specific applications in Telemedicine and Bio-Medical Engineering were mentioned. The challenges including the computational complexities and the satisfaction of the end user ultimately were stressed.

In his presidential address Professor P. Mannar Jawahar, Vice-Chancellor, Anna University Chennai highlighted the achievements of Sri Ramanujan and urged the students and staff to spread the spirit of Mathematics among the society.

> *Anyone who has never made a mistake has never tried anything new.*
>
> — *Albert Einstein*

GLOBALLY ASYNCHRONOUS AND LOCALLY SYNCHRONOUS PROCESSOR DESIGN

Introduction

In the past, computers were judged mainly on two criteria, namely, price and performance. Recently, power consumption has been a critical design constraint in the design of digital systems due to widely used portable systems such as cellular phones, portable computers including notebooks and PDAs, which require low power consumption with high speed and complex functionality. The design of such systems makes us to have reprogrammable processors such as microprocessors, microcontrollers, and DSP's. Processors are broadly classified based on the clock supplied to the circuitry. They are classified as fully synchronous and asynchronous processors.

Fully synchronous processor

During the last decade, an enormous increase in the number of transistors in VLSI designs has been reported. The developments will go further in the future with the downscaling of the technology. A fully synchronous processor is one in which there is a common reference of time. This common reference of time is called a global clock. Global clock is supplied to each and every circuitry. Fully synchronous design is not be feasible any more.

There are several challenges for fully synchronous designs, which are becoming an increasing burden. Recent researches show that the state-of-the-art globally synchronous designs are hardly applied to high frequency, high performance ultra large scale integrated (ULSI) circuits which require low power. On the path towards large single-chip solutions, many functional blocks come together on one die. Power consumption is increasing rapidly with the increased density of transistors, clock buffers and clock net. With growing die sizes and shrinking clock periods, clock skew will be a problem.

Clock distribution is another big challenge. The distribution time window reduces in inverse proportion with the clock frequency and therefore more and more effort has to be put to minimize the clock skew. Skew is defined as spatial variation of the arrival time of clock. Its reduction is needed in order to ensure correct operation.

Figure 1 explains the skew that is experienced in each and every clocked domain. There is one global clock supplied to the entire chip. This global clock is supplied to three other clocked domains. Here t_0, t_1 and t_2 are the clock arrival times to these domains. Observing clearly from Figure 1, the arrival times of t_0, t_1 and t_2 suffer a spatial variation. There is a noticeable skew (?) which has to be compensated. Skew also results in the unwanted power consumption and dissipation.

The problems such as clock skew, Electro Magnetic Interference (EMI) and power consumption caused by global clock distribution would become more significant in digital system design. The disadvantages of such a synchronous processor are the fact that some domains might work at lower frequency than others. Since there is only one clock generating a single frequency, this might result in unwanted power consumption and dissipation and fully synchronous circuits have very high design complexity.

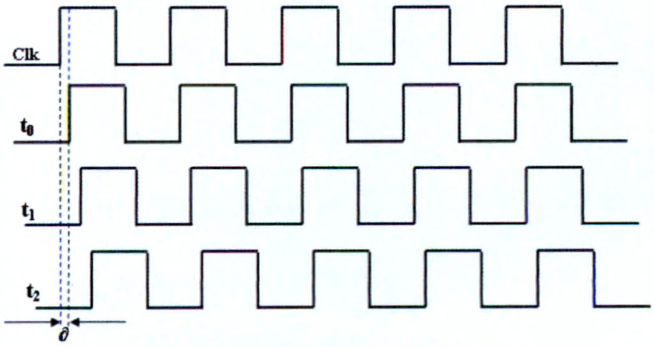


Figure 1 Global clock skew

Asynchronous processor design

A special group of asynchronous designs may become a solution for synchronous systems. The whole chip is split into different modules, which communicate asynchronously with each other. This can ease the design requirements.

The GALS (Globally-Asynchronous Locally-Synchronous) approach for building large deep submicron system on chips has been recently viewed as a promising method to handle the problems associated with global clocks. In GALS, the design is partitioned into a number of synchronous blocks with local autonomous clocks. The GALS based approach increases the design efficiency by dividing the design task into several smaller and independent design tasks that can be allocated to several design teams. The design can effectively partition the hardware structure into several separate data-driven modules that are independent in terms of timing constraints.

Data exchange between the blocks is realized by asynchronous means. By adding asynchronous interfaces to locally synchronous (LS) modules, the interiors of a specific module are encapsulated from the interfaces and it is possible for each module to use its own clock, power supply voltage, as well as low swing buses, or even to collapse the power supply for the synchronous part without affecting any other part of the chip. In the GALS concept, a number of advantages are introduced. Clock skew constraints and clock power consumption are reduced since the extensions of the local clock trees become smaller.

The clock speed and power supply voltage of the synchronous blocks can be adjusted individually. The clock distribution network normally consumes more than 40% of the total power of a CMOS circuit, as the clock nets operate at the highest switching frequency to any other signal and they require a large fan-out. Therefore, designing a clock tree is critical not only for performance but also for power. Gated clock technique is the most well-known low power technique. Figure 2 shows a clock gated circuit in which an "AND" gate is added in front of the block. Whenever a signal is required as an input, it is fed into the block, when not required, the output of the "AND" gate is zero.

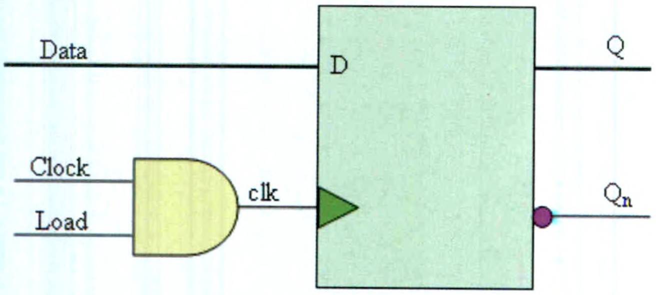


Figure 2 Clock gating

A GALS system can from power consumption point of view favorably be compared to a synchronous implementation with gated clocks. However, the most important benefit of the GALS based approach is the increased design efficiency, which is obtained by the inherent divide-and-conquer approach. As mentioned above, the GALS based approach uses asynchronous communication schemes between the local synchronous modules. There are several different asynchronous communication protocols, where in each protocol may have different data valid schemes. There are two most common schemes: one is the two-phase protocol and other one is the four-phase protocol.

Traditionally, a Phase Locked Loop (PLL) is used for on-chip clock generation. Reasons for using a PLL are low phase noise and low clock jitter. However, in most digital applications, phase noise and clock jitter is of less importance. Moreover, integrating an analog PLL in a digital noisy environment is difficult. In addition, the PLL is also sensitive to process variations. Fully digital methods are more desirable for reasons such as robustness, small size and low power consumption.

Asynchronous processor is a multiple clock domain processor. There is no single reference to time, but several individual clock domains. These individual clock domains are called as local clocks. The primary advantages of asynchronous design are:

- High operational speed: speed of operation is determined by the local latency rather than the worst- case global latency.
- Less emission of electromagnetic noise: Local clocks tend to tick at random point in time.
- Robustness toward varying current, voltage, temperature and manufacturing process.
- Better compensability and modularity: this is mainly because of simple handshake signaling and local timing.
- No Global clock distribution and clock skew problem: there is no clock signal that needs to be distributed with minimal phase skew across the circuit.

However, a number of issues still must be solved to fully exploit the GALS potential. There are also some drawbacks and they are:

- Compared to the fully asynchronous design, less research interests focus on GALS systems, partly because designing an unified reliable and robust asynchronous wrapper is difficult. The main challenges in the design of GALS circuits are: the interface circuits must be easy to glue with various synchronous paradigms, can generate a reliable stretchable clock and handle fast data communication. Meanwhile, they should require small chip area and have small latency.
- Furthermore, for asynchronous communication, metastability and deadlock issues must be considered. The efficiency of GALS relies heavily on the presence of small low-power on-chip clock generators for the local synchronous blocks.
- The asynchronous control logic that implements the handshaking normally represents an overhead in terms of silicon area, circuit speed, and power consumption. It is therefore pertinent to ask whether or not the investment pays off, i.e. whether the use of asynchronous techniques results in a substantial improvement in one or more of the above areas.
- Fully asynchronous design has many drawbacks, such as large overhead, complication of designs and lack of familiar synthesis CAD (Computer Aided Design) tools, strategies, lack of tools for testing and test vector generation. All of these make it still unacceptable to substitute the current VLSI design methods.

CONCLUSION

The goal of thesis work is to implement the design of VLIW processor, and designing a Novel architecture with efficient algorithms built in each stage of the design. During the design, the processor is subdivided into various synchronous zones and each zone is running with its own clock. The clock generation is done by the inverter logic since it is better than PLL implementation. The various synchronous blocks are communicated using asynchronous wrapper circuits. This GALS methodology will leads to more power reduction. The above techniques are used in the design phase of the processor.

The main aim of the research work is to implement VLIW processor with minimum power requirement. The following methods is used to achieve the above said objective.

- To improve the power reduction of the processor, the hybrid dynamic voltage scaling is used. Depending upon the task sets a particular voltage scaling is selected and the maximum power reduction and improved speed of operation are obtained due to hardware implementation. By using this methodology the VLIW processor can be better utilized during the voltage/frequency calculations. The maximum power reduction possible is about 60 to 70 % with respect to normal operation.
- 'GALS architecture' of the processor will further reduce the power since various block are run at different frequencies and by using this approach the power reduction is directly proportional to frequency. The maximum reduction due this architecture is about 21 to 30 %.

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SEAMLESS BROADBAND NETWORKS

Emerging seamless broadband networking for ubiquitous multimedia communications involves seamless mobility wherein you can reach the people, things and information you need, anywhere, anytime. Seamless mobility harnesses the power of technology convergence and enables smarter, faster, cost-effective and flexible communication. The information superhighway of the future involves human-human, human-machine, machine-machine interactions and no single communication and networking technology – wired or wireless - will fit all the requirements. Such networks characterized by their very large scale, the amount of traffic carried and the quality of service they are expected to provide, place a heavy emphasis on implementing efficient networks. There should be availability of multiple ways to connect in order to achieve the optimum combination of bandwidth, reliability, and cost for different usage scenarios and applications for short-range, local, and wide areas. A fundamental challenge would be to provide users with seamless mobility across heterogeneous networks and applications without the necessity to be involved with cumbersome technical issues. A high-capacity optical backbone network must support and interconnect these diverse access systems.

The optical backbone must incorporate transparent optical nodes, a fast control plane, efficient multiplexing and routing of different traffic types, and cost-effective add/drop of broadband access traffic. Wireless technologies with higher bandwidth and reach should allow for a seamless extension of broadband access from this optical backbone to the end user. Underutilized bandwidth in broadband networks needs to be recovered to improve network efficiency.

The efficiency of a wireless network is only as good as the efficiency of its underlying layers. The comprehensive efficient design, architecture and performance should not only cover all the layers, from physical to network to service, but their interaction as well. In addition to the single-hop model for today's cellular/wireless networks, another model based on radio-to-radio multi-hopping has emerged: ad-hoc, self-organized networks that can be dynamically configured. These rapidly deployable networks are useful for applications such as information sharing, emergency relief efforts during disasters, sensor networks, or as an alternative to traditional networking in developing areas without an existing communication infrastructure. These networking paradigms pose many technical issues that result from traffic loading variations, changing/ unpredictable network topologies, high degree of mobility, intermittent connection and bandwidth limitations. Security, routing, and mobility management represent major research challenges.

The long haul segment of the telecommunications infrastructure has for some years been equipped to transport large amounts of data, with networks being capable of providing up to 160 wavelength channels each operating at 10Gbps (migrating to 40Gbit/s) over a single fibre. Recent advances in the bandwidth available in enterprise networks e.g. 1GigE and 10GigE has shifted attention to the data bottleneck in the metropolitan and ultimately the access layers which link the transport segment to end users (or enterprises). The edge node in optical networks is the focus of efforts to enhance the capacity and quality of service performance of the metropolitan optical backbone. It must interface wired broadband access systems, such as PON (passive optical network), and wireless access systems such as WiMax and cellular mobile. An edge node architecture that provides interfaces in an efficient modular way, multiplexes traffic into WDM (wavelength division multiplexed) and subcarrier channels, provides fast switching capability, and carries quality of service across network boundaries is essential. The rest of the article focuses on the CDMA based approach to address the issue of edge node performance enhancement as well as local access upgrade.

In the evolution of future networks it is becoming advantageous to execute some of the signal processing, routing/ switching and dynamic reconfiguration of the edge node directly in the optical domain. Optical Code Division Multiple Access (OCDMA) is one technique allowing the exploitation of new hybrid approaches utilising the multiple multiplexing domains of time, space, wavelength and code and is also able to support bursty, asynchronous traffic without the need for time synchronization between communicating nodes thereby simplifying network management. It is attractive for its capacity for high levels of connectivity, flexible bandwidth management, data-format-independent physical layer security, decentralized network control, contention free networking, fine channel granularity and for protocol and topology transparency.

An all optical routing architecture based entirely on multi-wavelength CDMA coding is one research work under focus in the Department of ECE, that exploits the range of advantages mentioned above. The research currently undertaken focuses on determining the viability of a code-based optical routing employing a two-level coding scheme, providing a system analysis considering the effect of some physical layer impairments. The first level of coding is employed to establish connections between users within a local area network whilst a second level of coding is utilized to implement routing/ interconnectivity between networks. Unlike in MPLS, there is no need for any label processing and switch control, the information being directed to the appropriate route based on the code; the approach is more akin to add/drop based on code. This CODE-based all-optical routing, employing a 2-level coding scheme is proposed with the objective of realizing an all-optical network exhibiting spatial reuse of codes and interconnectivity between networks. The throughput in 'packets/time slot' offered by the scheme is compared with that of the WDMA system. The 2-level OCDMA scheme implemented using intensity noise controlled EDF spectrum sliced sources and dynamic optimum threshold detection, can achieve significantly high throughputs at higher offered loads, compared to a WDMA system, in a noisy multi-user environment.

Recently, the sharp increase in demand for high speed access solutions for both business and home usage has stimulated opportunities within Passive Optical Networks (PONs) deployment strategies. It is readily accepted that the next stage of the evolution of this segment must be capable of supporting and stimulating the rapid and continued growth of data traffic in a manner that is able to share the infrastructure amongst a greater number of end users. The introduction of Wavelength Division Mutliplexing technologies represents the next stage of the evolution albeit restricted to a limited number of wavelength carriers. The research carried out in the department centres on developing an understanding of the extension of the scalability of these types of networks beyond WDM through the introduction of a coding dimension on top of the wavelength multiplex, thereby creating a significant increase in the interconnection capability of the deployed infrastructure through upgrades of the terminal equipment only.

CDMA is extensively used in wireless networks, however when applied on an optical link results in low network throughput at moderate to high loads, primarily due to multiple access interference and beat noise. Hence OCDMA cannot be used as a stand-alone technique for access networks inspite of the above mentioned advantages. A number of approaches exist to mitigate the impact of multiple access interference and beat noise; some of them being,

- spreading in temporal and wavelength domains simultaneously
- using bipolar coding, optical domain FEC and coherent detection
- using a hybrid WDMA/OCDMA approach
- using 2-level/multilevel coding schemes

The aim of our research is to study the implementation issues associated with these approaches for using OCDMA for local access upgrade, pertaining to ;

➢ physical layer requirements : evolving cost effective architectures to efficiently utilize the expensive optical sources, encoder/decoder implementations, low noise detection strategies,

➢ medium access control design : to efficiently use available codes to resolve contention for the shared medium and thereby achieve network scalability, to overcome receiver contention,

➢ routing aspects : to identify feasible all-optical routing/switching strategies, optical CDMA code based router, hybrid WDM/CDM routers with rapid reconfiguration capability.

In order to increase revenues, multiple services at high capacity, over reasonable distances, with maximum flexibility and at low cost, must be provisioned. This involves the identification and deployment of the next phase in the evolution requiring low cost, upgrade routes to achieving more flexible and dynamic networks. The merits and demerits of the different approaches mentioned above taking into account the implementation issues are to be studied so as to identify the most suitable and cost effective approach, evolve an architecture for it and implement a test bed on an integrated platform and propose the best option which is commercially viable.

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STATE-BASED ARITHMETIC CODING FOR IMAGE COMPRESSION

The storage space, transmission time and the transmission bandwidth requirements of an image can be considerably reduced by using image compression techniques. Efficient compression of raw digital image is the first requirement for all image and video applications. Hence, the objective of this research work is to propose new algorithm for compressing gray scale images. The proposed image compression algorithm is targeted towards possessing the following features:

1. Lower bitrate
2. Higher Peak Signal-to-Noise Ratio (PSNR)
3. Better subjective quality images
4. Comparable computational complexity.

Image compression techniques can be classified into two groups: lossless and lossy. In lossless image compression, the reconstructed image after compression is numerically and visually identical to the original image on a pixel-by-pixel basis. In lossy image compression, the reconstructed image contains degradations relative to the original image. There are many lossless image compression algorithms proposed by various researchers.

Entropy coders can be broadly classified into four categories, namely run-length coding, dictionary-based coding, grammar-based coding and statistical coding.

In run-length coding, the input sequence is parsed into variable length segments and each segment is encoded with a variable length codeword. This technique is highly efficient only when many symbols have larger run-length.

In dictionary-based technique, each symbol or a pattern of symbols in the input sequence is encoded using a pointer to its position in a static or dynamic dictionary. This technique is not well suited for image coding since images do not generate same pattern of symbols frequently, causing more number of bits to represent each dictionary element.

In grammar-based technique, finite patterns of symbols are encoded using context-sensitive or context-free grammar or rules. This technique performs best only when the symbol sequence consists of identical strings that are adjacent and hence not suited for image coding.

Statistical techniques use a context modeler to estimate the symbol probabilities and use them to encode each symbol. Shorter codeword is assigned to symbols or group of symbols that have higher probability of occurrence. Huffman coding, Arithmetic coding, Binary Arithmetic coding, Context-based Adaptive Lossless Image Coding (CALIC), Context Adaptive Binary Arithmetic Coding (CABAC) and Context-based two-Dimensional Variable Length Coding (C-2D-VLC) belong to this category.

Huffman coding assigns a set of variable-size codes to symbols based on their probabilities. The algorithm starts by building a list of all the alphabet symbols in descending order of their probabilities. It then constructs a tree, with a symbol at every leaf, from the bottom up. This is done in steps, where at each step the two symbols with smallest probabilities are selected, added to the top of the partial tree, deleted from the list, and replaced with an auxiliary symbol representing the two original symbols. When the list is reduced to just two auxiliary symbols (representing the entire alphabet), the tree is complete. The tree is then traversed to determine the codes of the symbols. Huffman coding produces ideal variable-size codes (codes whose average size equals the entropy) when the symbols have probabilities of occurrence that are negative powers of 2. This is because the Huffman method assigns a code with an integral number of bits to each symbol in the alphabet. Huffman coding is widely used but is inefficient when the alphabet size is small or symbol probabilities are highly skewed.

Standard arithmetic coding (Witten et al 1987) is more efficient when the alphabet size is small or the symbol probabilities are highly skewed. In arithmetic coding, a message is represented by an interval of real numbers between 0 and 1. As the message becomes longer, the interval needed to represent it becomes smaller, and the number of bits needed to specify that interval grows. Successive symbols of the message reduce the size of the interval in accordance with the symbol probabilities generated by the model. The more likely symbols reduce the range by less than the unlikely symbols and hence add fewer bits to the message.

Binary Arithmetic coding is similar to that of Arithmetic coding with the exception that the alphabet are binary symbols. Q-Coder, QM-Coder and MQ-Coder are different versions of Binary Arithmetic coding technique.

CALIC is based on predictive coding using modeling contexts. This technique has poor performance on images containing very few widely separated gray levels. Further, the number of modeling contexts is more, requiring more bits to represent them.

AVC H.264 standard (ITU-T Recommendation H.264 2003) uses a context based lossless arithmetic coding scheme, namely CABAC (Marpe et al 2003) which is an adaptive binary arithmetic coding technique combined with context modeling. This technique relies on pre-selected context model for estimating conditional probabilities. In H.264, the image (intraframe) is transformed using 4×4 integer DCT and entropy coded using CABAC. First, the coded block flag is transmitted for the given block of quantized transform coefficients indicating whether or not the block has nonzero coefficients. If the coded block flag is zero, that is, no nonzero coefficients in the block, then no further information is transmitted for this block. Otherwise, a significance map specifying the positions of significant coefficients is binarized using fixed-level binarization and then entropy coded using CABAC. Finally, the absolute value of the level is binarized using unary / K-th order Exp-Golomb binarization along with sign value and entropy coded using CABAC in reverse order.

AVS standard (Fan et al 2004) uses a context based lossless coding scheme, namely C-2D-VLC (Wang et al 2006) which uses multiple two-dimensional variable length coding tables along with Exponential-Golomb codes to encode symbols. The two-dimensional tables are made adaptive based on contexts. In AVS, the image (intraframe) is transformed using 4×4 integer DCT and entropy coded using C-2D-VLC. The quantized transformed coefficients are translated into Run-Level pairs and are coded in reverse scan order. Depending on the last coded level's magnitude, one table among 19 tables is selected for coding the next value. For every 2D-VLC table, codewords are constructed based on Exponential-Golomb codes.

In this newsletter, a state-based dynamic multi-alphabet arithmetic coding algorithm is proposed to overcome the drawback in arithmetic coding by considering local probabilities of the symbols instead of global symbol probabilities. Image sources are generally non-stationary. The symbols (gray levels or transformed coefficients) that appear locally within a small neighborhood are only a small fraction of the total alphabet. The symbols which do not occur locally distort the Cumulative Frequency (CF) of the local symbols and reduce the compression efficiency. The optimal solution to overcome this problem is to consider only the probabilities of locally occurring symbols for encoding purpose. This concept is used in the proposed state-based dynamic multi-alphabet arithmetic coding algorithm. The performance of the proposed lossless technique is compared with that of Huffman and standard arithmetic coding of raw images in terms of CR. Also, it is used in the place of Huffman coding for coding the quantized DCT coefficients in JPEG and the performance is compared with AVS and AVC compression standards in terms of CR, PSNR and subjective quality.

In the proposed state-based arithmetic coding algorithm, a symbol represents a gray level in an image or a transform coefficient whereas in the context-adaptive arithmetic coding, a symbol is of length 1 bit, that is, 1 or 0. Further, the proposed state-based arithmetic coding algorithm uses a different method to get the context compared to that in Context-based adaptive Arithmetic Coding scheme. The context in the proposed algorithm is based on the statistics of locally occurring symbols as against global statistics used by CABAC. Hence, the proposed algorithm adapts well to the symbol statistics and thereby achieves better compression ratio.

Table 1 shows the CR values obtained using Huffman coding, standard arithmetic coding and the proposed state based arithmetic coding for these five test images each of size 256 x 256. From Table 4.6, it is found that the proposed technique yields higher CR values. Since all these three techniques are lossless there is no loss in the subjective quality of the reconstructed images as compared to the corresponding original images.

Table 1 CR values for the five test images using Huffman, Standard arithmetic coding and State-based arithmetic coding

Image	Static Huffman arithmetic coding		Standard adaptive arithmetic coding		State-based	
	CR	Compressed bits	CR	Compressed bits	CR	Compressed bits
flower	1.07	491373	1.08	488628	1.10	479461
lena	1.10	478647	1.10	476271	1.13	466428
milk	1.52	344547	1.54	341432	1.85	284154
babboon	1.09	479933	1.10	477719	1.11	472221
couple	1.12	467945	1.13	465718	1.17	450307

A novel lossless state-based dynamic multi-alphabet arithmetic coding algorithm has been proposed in this newsletter. The performance of this algorithm is compared with that of Huffman coding and standard arithmetic coding in terms of CR for raw images. Also, the performance of this algorithm is compared with that of C-2D-VLC and CABAC in terms of CR, PSNR and subjective quality while coding transformed coefficients. It is found that the proposed technique yields an increase of about 45% in CR after coding the transformed coefficients.

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Know How to Secure Your Home Computer

By implementing the following guideline you will be increasing your computers security integrity making it harder for intruders to break in:

1. Anti-Virus. After installing your operating system or purchasing a new computer the first priority is to immediately install an anti-virus package to protect you when you first connect to the internet. You should choose a package that will automatically update itself on a daily basis or make sure you configure your chosen package to update its virus definitions at a specific time when it is connected to the internet.

2. Patch The Operating System. Once you have your anti-virus installed you can connect to the internet and click on your Update Windows icon which will take you through the process of downloading and installing the latest system patches. Also, make sure that the downloading and installing of important updates is set to automatic.

3. Firewall Defence. Microsoft Windows has a built in basic Firewall but it is always advisable to install a third party Firewall as this will prevent any unrecognised outbound connections or buy a router which has a built in Firewall for the ultimate first line of defence protection.

4. Spyware Protection. Make sure that you have a memory resident Spyware application which monitors any changes that are being made to the registry or Internet Explorer. These tend not to be included in the free Spyware programs available and some of the freeware programs actually contain Spyware. By purchasing a brand named Spyware package you will get a more advanced software package which include the memory resident program and does not contain any Spyware. Configure the Spyware program to automatically download any new updates and allow it to scan your hard drive at least once a week to pick up any malicious code for you to remove.

5. Email Spam. Be sure to set up an email spam filter on your email account. This is a fairly simple process and there will usually be a help icon which will guide you through the process. Basically you will be blocking all email coming into your inbox until you apply a rule that allows only emails that you define as being safe of from know contacts, anything else is sent to the junkbox. You will have to be careful as if you are awaiting an email from a new contact, the email will be sent to your junkbox. You will have to find that email and add it to your safe contacts list and in the future it will arrive in your inbox. DO NOT OPEN ANY SPAMMED EMAILS OR ATTACHMENTS AS THIS WILL INDICATE THAT YOUR EMAIL ADDRESS IS VALID AND / OR IT CAN CONTAIN A VIRUS.

6. Wireless Security. If you have a wireless home network then make sure you have wireless encryption enabled preventing any unauthorised connections to your network or internet.

7. Downloading Software or Music. If you download software applications using a Peer to Peer networking program like Limewire or Kazaa then be careful as some of the files can contain viruses or spyware.

8. Backup, Backup, Backup! Purchase an external hard drive as this can be used to backup all your music, video and picture files, just in case your PC becomes infected with a virus and crashes the operating system and you need to re-install Windows. You can the view all of you files without loosing them.

9. Encryption. If you keep sensitive data on your PC then applying encryption to these files makes it hard for someone to view the contents.

10. Passwords. Try to use a password which is not a commonly used name but one that is unique, either by adding uppercase characters and numbers to the word, which strengthens the passwords encryption.

Source : http://www.knowledgediary.com/article-200.html

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PROGRAMME SCHEDULE FOR FEBRUARY – 2009

Date	Stream	Session I	Session II
		9.00 a.m. - 10.30 a.m.	11.00 a. m. - 12.30 p. m.
02.02.2009	B.E./B.Tech.I Year, II Semester & IV Sem ECE	MA 2161 Mathematics – II (II Sem) Dr.Vimala Manivasakan	MA 1254 Random Processes (IV Sem) Dr.A.Vijayakumar
03.02.2009	B.E. Mechanical Engineering	ME 1251 Thermal Engineering (IV Sem) Dr.N.V.Mahalakshmi	ME 1252 Kinematics of Machinery (IV Sem) Dr.V.Sundareswaran
04.02.2009	B.E. Electronics and Communication Engg.	EC 1252 Signals & Systems (IV Sem) Dr.Y.V.Ramana Rao	EC 1351 Digital Communication (VI Sem) Dr.M.Meenakshi
05.02.2009	B.E. Electrical and Electronics Engineering	EE 1251 Electrical Machines-II (IV Sem) Dr.S.Chandra Mohan	IC 1251 Control Systems (IV Sem) Mr.S.K.Patnaik
06.02.2009	B.E. Computer Science and Engineering	IT 1402 Mobile Computing (VIII Sem) Dr.P.Narayanasamy	CS 1253 Visual Programming (IV Sem) Dr.S.Swamynathan
09.02.2009	B.E./B.Tech.I Year, II Semester & IV Sem ECE	MA 2161 Mathematics – II (II Sem) Dr.Vimala Manivasakan	MA 1254 Random Processes (IV Sem) Dr.A.Vijayakumar
10.02.2009	B.E. Mechanical Engineering	ME 1251 Thermal Engineering (IV Sem) Dr.N.V.Mahalakshmi	ME 1252 Kinematics of Machinery (IV Sem) Dr.V.Sundareswaran
11.02.2009	B.E. Electronics and Communication Engg.	EC 1252 Signals & Systems (IV Sem) Dr.Y.V.Ramana Rao	EC 1351 Digital Communication (VI Sem) Dr.M.Meenakshi
12.02.2009	B.E. Electrical and Electronics Engineering	EE 1251 Electrical Machines-II (IV Sem) Dr.S.Chandra Mohan	IC 1251 Control Systems (IV Sem) Mr.S.K.Patnaik
13.02.2009	B.E. Computer Science and Engineering	IT 1402 Mobile Computing (VIII Sem) Dr.P.Narayanasamy	CS 1253 Visual Programming (IV Sem) Dr.S.Swamynathan
16.02.2009	B.E./B.Tech.I Year, II Semester & IV Sem ECE	MA 2161 Mathematics – II (II Sem) Dr.Vimala Manivasakan	MA 1254 Random Processes (IV Sem) Dr.A.Vijayakumar
17.02.2009	B.E. Mechanical Engineering	ME 1251 Thermal Engineering (IV Sem) Dr.N.V.Mahalakshmi	ME 1252 Kinematics of Machinery (IV Sem) Dr.V.Sundareswaran
18.02.2009	B.E. Electronics and Communication Engg.	EC 1252 Signals & Systems (IV Sem) Dr.Y.V.Ramana Rao	EC 1351 Digital Communication (VI Sem) Dr.M.Meenakshi
19.02.2009	B.E. Electrical and Electronics Engineering	EE 1251 Electrical Machines-II (IV Sem) Dr.S.Chandra Mohan	IC 1251 Control Systems (IV Sem) Mr.S.K.Patnaik
20.02.2009	B.E. Computer Science and Engineering	IT 1402 Mobile Computing (VIII Sem) Dr.P.Narayanasamy	CS 1253 Visual Programming (IV Sem) Dr.S.Swamynathan
23.02.2009	B.E./B.Tech.I Year, II Semester & IV Sem ECE	MA 2161 Mathematics – II (II Sem) Dr.Vimala Manivasakan	MA 1254 Random Processes (IV Sem) Dr.A.Vijayakumar
24.02.2009	B.E. Mechanical Engineering	ME 1251 Thermal Engineering (IV Sem) Dr.N.V.Mahalakshmi	ME 1252 Kinematics of Machinery (IV Sem) Dr.V.Sundareswaran
25.02.2009	B.E. Electronics and Communication Engg.	EC 1252 Signals & Systems (IV Sem) Dr.Y.V.Ramana Rao	EC 1351 Digital Communication (VI Sem) Dr.M.Meenakshi
26.02.2009	B.E. Electrical and Electronics Engineering	EE 1251 Electrical Machines-II (IV Sem) Dr.S.Chandra Mohan	IC 1251 Control Systems (IV Sem) Mr.S.K.Patnaik
27.02.2009	B.E. Computer Science and Engineering	IT 1402 Mobile Computing (VIII Sem) Dr.P.Narayanasamy	CS 1253 Visual Programming (IV Sem) Dr.S.Swamynathan

ANNA EDUSAT
CENTRE FOR FACULTY DEVELOPMENT
ANNA UNIVERSITY CHENNAI

PROGRAMME SCHEDULE FOR MARCH – 2009

Date	Stream	Session I	Session II
		9.00 a.m. - 10.30 a.m.	11.00 a. m. - 12.30 p. m.
02.03.2009	B.E./B.Tech.I Year, II Semester & IV Sem ECE	MA 2161 Mathematics – II (II Sem) Dr.Vimala Manivasakan	MA 1254 Random Processes (IV Sem) Dr.A.Vijayakumar
03.03.2009	B.E. Mechanical Engineering	ME 1251 Thermal Engineering (IV Sem) Dr.N.V.Mahalakshmi	ME 1252 Kinematics of Machinery (IV Sem) Dr.V.Sundareswaran
04.03.2009	B.E. Electronics and Communication Engg.	EC 1252 Signals & Systems (IV Sem) Dr.Y.V.Ramana Rao	EC 1351 Digital Communication (VI Sem) Dr.M.Meenakshi
05.03.2009	B.E. Electrical and Electronics Engineering	EE 1251 Electrical Machines-II (IV Sem) Dr.S.Chandra Mohan	IC 1251 Control Systems (IV Sem) Mr.S.K.Patnaik
06.03.2009	B.E. Computer Science and Engineering	IT 1402 Mobile Computing (VIII Sem) Dr.P.Narayanasamy	CS 1253 Visual Programming (IV Sem) Dr.S.Swamynathan
09.03.2009	B.E./B.Tech.I Year, II Semester & IV Sem ECE	MA 2161 Mathematics – II (II Sem) Dr.Vimala Manivasakan	MA 1254 Random Processes (IV Sem) Dr.A.Vijayakumar
10.03.2009	B.E. Mechanical Engineering	ME 1251 Thermal Engineering (IV Sem) Dr.N.V.Mahalakshmi	ME 1252 Kinematics of Machinery (IV Sem) Dr.V.Sundareswaran
11.03.2009	B.E. Electronics and Communication Engg.	EC 1252 Signals & Systems (IV Sem) Dr.Y.V.Ramana Rao	EC 1351 Digital Communication (VI Sem) Dr.M.Meenakshi
12.03.2009	B.E. Electrical and Electronics Engineering	EE 1251 Electrical Machines-II (IV Sem) Dr.S.Chandra Mohan	IC 1251 Control Systems (IV Sem) Mr.S.K.Patnaik
13.03.2009	B.E. Computer Science and Engineering	IT 1402 Mobile Computing (VIII Sem) Dr.P.Narayanasamy	CS 1253 Visual Programming (IV Sem) Dr.S.Swamynathan
16.03.2009	B.E./B.Tech.I Year, II Semester & IV Sem ECE	MA 2161 Mathematics – II (II Sem) Dr.Vimala Manivasakan	MA 1254 Random Processes (IV Sem) Dr.A.Vijayakumar
17.03.2009	B.E. Mechanical Engineering	ME 1251 Thermal Engineering (IV Sem) Dr.N.V.Mahalakshmi	ME 1252 Kinematics of Machinery (IV Sem) Dr.V.Sundareswaran
18.03.2009	B.E. Electronics and Communication Engg.	EC 1252 Signals & Systems (IV Sem) Dr.Y.V.Ramana Rao	EC 1351 Digital Communication (VI Sem) Dr.M.Meenakshi
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20.03.2009	B.E. Computer Science and Engineering	IT 1402 Mobile Computing (VIII Sem) Dr.P.Narayanasamy	CS 1253 Visual Programming (IV Sem) Dr.S.Swamynathan
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31.03.2009	B.E. Mechanical Engineering	ME 1251 Thermal Engineering (IV Sem) Dr.N.V.Mahalakshmi	ME 1252 Kinematics of Machinery (IV Sem) Dr.V.Sundareswaran

Our eyes cannot focus two scenes simultaneously. Why?

Focusing of eyes

Vision is a brain phenomenon and not an ocular (eye) phenomenon. The brain behaves like a film or a LCD screen in the camera. Even computer chips which can sense vision can stimulate the brain to perceive the vision.

The basic mechanism of vision is binocular, which is the three dimensional construction of the scenes. The depth, length, breadth are all configured by the scenes received by both eyes through optic nerve projections.

The fundamental contribution of the projection of scenes to the brain is by the so called camera the eyes. The eye movements are such that they move like yoked cart or the front wheel of a car. They cannot move independently, provided there is paralysis of the muscles moving the eye, which results in a condition called squint.

This learning of steriognotic vision is from childhood, due to the phenomenon called ocular fixation of the brain. These impressions are fixed in the brain, in the region called occipital cortex, which is in the rear portion of the brain. In persons who have squint congenitally, the ocular fixations are poor and there will not be a complete processing of steriognotic vision.

If there is acute squint due to paralysis of muscles which deviate the eye ball, due to some disease, there will be a double vision and there will be a double scene projection, which will confuse the brain, which cannot integrate the already formed templates of stereognotic vision.

This is called diplopia. Patients with acute diplopia will prefer to close one eye and see through the other eye, since it is so horrid to see two visions of two scenes at the same time.

Added to that the false image will be dull, and true image will be bright, and handling of objects become difficult for them since exact location and depth of the objects and distance will not be appreciated.

So the ultimate reason for not observing two visions at a time, is by the correct eye ball yoked movements to project the same scenes in three dimensions, sending them through the ocular nerve and tract projections to the brain's cerebral occipital cortex.

Source : www.thehindu.com

CALL FOR PAPERS TO BE PRINTED IN NEWS BULLETIN IN FOCUS SECTION

(for February / March issues)

Articles are invited from faculty members on any one of the following topics. The content should not exceed 1200 words. A photo along with a short resume may also be attached. The articles should reach the office of Anna University News Bulletin on or before 15th February / March 2009. The best article will be selected for publication by the Editorial Committee.

1.	Biotechnology	Bioanalytical Methods for diagnosis of Disease
2.	Chemical Engineering	Green Processes in Chemical Engineering
3.	Ceramic	Bioceramics
4.	Textile	Smart Clothing
5.	Nanotechnology	Nanomedicine

POLLUTION FACTS

Our Pollution

- Americans use approximately 2.2 billion pounds of pesticides every year. Research shows that target pests will eventually develop resistance to these pesticides anyway.
- Seventy-three different kinds of pesticides have been found in groundwater, which is potential drinking water.
- More than 100 active pesticide ingredients are suspected of causing cancer, birth defects, and gene mutation.
- A growing list of pesticides have the potential to disrupt the immune and endocrine systems and of having long term impacts on the offspring of exposed humans and animals.
- The cost of one nuclear weapons test alone could finance the installation of eighty thousand hand pumps, giving third world villages access to clean water.
- Estimated costs of cleaning up the 24,000 contaminated federal nuclear facilities range from $100 billion to $400 billion. (The Environmental Protection Agency)
- Each year U.S. factories spew 3 million tons of toxic chemicals into the air, land, and water. That compounds the over one-half billion tons of solid hazardous wastes - we're not talking about your garbage here - that get dumped across the nation for our generation to one day clean up. (The Gale Environmental Scorecard)

- In 1987, the U.S. released 1.2 million tons of toxic chemicals into our atmosphere, 670,000 tons into our soil, and 250,000 tons into our water. (International Wildlife magazine)
- PCB's haven't been used in the U.S. for more than two decades. But dangerous levels of PCB's remain in the natural environment and pose a threat to human health. —ENN for 5/27/98
- "Everyone has some amount of dioxin in his or her body, and the average level is already high enough to endanger health." —Lois Gibbs
- Nitrogen is essential to crops but too much will leak into groundwater and rivers causing nutrient pollution in rivers and oceans and severe human health problems from nitrate pollution.
- In the US, 41% of all insecticides are used on corn. Eighty per cent of these are used to treat a pest that could be controlled simply by rotating the corn for one year with any other crop.

Source : http://www.knowledgediary.com/article-83.html

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ANNA UNIVERSITY

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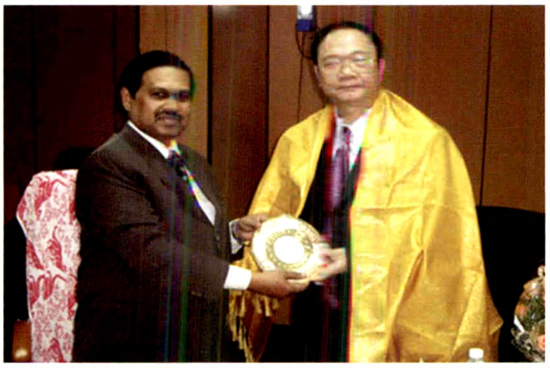
VOLUME 3 - ISSUE 12

APRIL 2009

News Bulletin

ANNA BIRTH CENTENARY YEAR
TWO DAY NATIONAL SEMINAR ON
"English and Communication Skills for Employability"

SRI RAMANUJAR ENGINEERING COLLEGE
Kolapakkam, Vandalur, Chennai - 48.
Affiliated to Anna University



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> *The secret of success is to know something nobody else knows.*
>
> **- Aristotle Onassis**

EDITORIAL COMMITTEE

Dr. G.M. Samuel Knight, Chairman
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PUBLICATION

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Photos : Ramanujan Computing Centre
Anna University Chennai

FROM THE VICE - CHANCELLOR'S DESK

T.S.Elliot said, "April is the cruellest month". He had his own personal problems and did not mean university and college end semester examinations in the month of April. Though it may not be cruel, it is certainly a gruelling month for students, teachers and educational administrators. Of course, parents of students also go through this agonizing process of examination. For all this we cannot wish away examinations, as they are part and parcel of the educational process of teaching and learning.

I am proud of the fact that this stupendous and strenuous task of examinations in April is performed meticulously by our dedicated team of officials, teachers and supporting staff. When the single affiliating type Anna University was entrusted with the task of conducting examinations all over the state, the whole exercise was carried out flawlessly. The results were released on time. Now the number of affiliated colleges with Anna University is increasing year after year. It seems that the enormity of examination work will continue to grow in terms of the number of courses in UG and PG, part-time and full time categories and regular and distance modes. In fact the examinations are now held all over the country for our distance education programmes.

Our university is committed to carry on with the legacy of perfect examination system. Our strength lies in our well-trained manpower at every level of the examination process. Additionally, our entire process is computerized with adequate capability and data backup services. While time is reduced on certain routine works, efficiency is also increased for effective delivery of results and certificates. With all this, revaluations and arrear examinations are also held to help those who have faltered in their first attempts.

We are with the students and the teachers all through this process of examination, guiding, helping and facilitating them. No wonder, our system is creditable and commendable. We are not complacent, however. We are making every effort to improve upon our past experiences. We welcome your suggestion and, indeed, look forward to your co-operation for strengthening our capacity to serve our society in the field of technical education.

(Dr.P. Mannar Jawahar)
Vice Chancellor

VICE-CHANCELLOR'S PROGRAMME DURING

MARCH – APRIL 2009

Dr.P.Mannar Jawahar, Vice-Chancellor, Anna University Chennai inaugurated the National Seminar on "English and Communication Skills for Employability" on 25th March 2009

Dr.P.Mannar Jawahar, Vice-Chancellor, Anna University Chennai inaugurated the CEG Hostel Day 2009 celebrations on 5th April 2009

Dr.P.Mannar Jawahar, Vice-Chancellor, Anna University Chennai inaugurated the 6th Indo-Dutch Course on Coastal Zone Management: Coastal Tourism on 6th April 2009

Inauguration
6th Indo-Dutch Course on Coastal Zone Management: Coastal Tourism
Integrated Coastal Management Facility
6 April, 2009

Dr.P.Mannar Jawahar, Vice-Chancellor, Anna University Chennai inaugurated the MIT Hostel Day celebrations on 6th April 2009

Dr.P.Mannar Jawahar, Vice-Chancellor, Anna University Chennai inaugurated the MIT Library Circulation Counter on 6th April 2009

Dr.P.Mannar Jawahar, Vice-Chancellor, Anna University Chennai inaugurated the Workshop on "Petroleum Geology" at the Department of Geology, Anna University Chennai on 8th April 2009

Dr.P.Mannar Jawahar, Vice-Chancellor, Anna University Chennai inaugurated the Alagappa College of Technology Hostel Day Celebrations on 11th April 2009

ANNA UNIVERSITY SPORTS DAY

on 31st March 2009

SPONSORED PROJECTS

CENTRE FOR DISASTER MITIGATION AND MANAGEMENT

Name of Coordinator	Title of the Project	Funding Agency	Amount Sanctioned (Rs. in lakhs)	Duration (years)
Rajarathnam.S	Remote sensing and GIS application for Chennai city on e-Governance aspects (Information Technology for Disaster Risk Assessment and Management)	Department of Information Technology, GOI	445.57	3

CONFERENCES / SEMINARS / SYMPOSIA / WORKSHOPS / FACULTY DEVELOPMENT AND TRAINING PROGRAMMES ORGANIZED

DEPARTMENT OF CERAMIC TECHNOLOGY

National Level Students' Technical Symposium on "CONCERT '09" on 18th March 2009, co-ordinated by **Kamaraj.V**.

DEPARTMENT OF COMPUTER SCIENCE AND ENGINEERING

National Level Technical Symposium on "Abacus '09" on 20th & 21st March 2009, co-ordinated by **Kannan.A** and **Bose.S**.

DEPARTMENT OF ENGLISH

National Seminar on "English and Communication Skills for Employability" on 25th and 26th March 2009, co-ordinated by **Dhanavel.S.P**.

CENTRE FOR WATER RESOURCES

Seminar on "Rejuvenation of Water Bodies and Water Courses in Chennai Metropolitan Area" on 23rd March 2009, co-ordinated by **Karunakaran.K**.

AFFILIATING CENTRES

NSS

NATIONAL SERVICE SCHEME CELL
ANNA UNIVERSITY CHENNAI
"SOFT SKILL AND PLACEMENT TRAINING PROGRAMME"
ON 23-02-2009
JOINTLY ORGANISED BY
NSS CELL, ANNA UNIVERSITY CHENNAI
AND
SSN COLLEGE OF ENGINEERING, CHENNAI

NSS Cell Anna University, Chennai, organized a One Day Workshop on "Soft Skill and Placement Training Programme" on 23rd February 2009 at S.S.N.College of Engineering, Kanchipuram. Thiru.G.Sridharan, Director, Vertex Systems Limited inaugurated the workshop.

NSS Cell Anna University, Chennai, organized the One Day Workshop On "Soft Skill and Placement Training Programme" on 27th February 2009 at A.M.S.College of Engineering, Chennai. Er. Narasimman Parthasarathy, CTS inaugurated the workshop.

NATIONAL SERVICE SCHEME CELL
ANNA UNIVERSITY CHENNAI
"SOFT SKILL AND PLACEMENT TRAINING PROGRAMME"
ON 27-02-2009
JOINTLY ORGANISED BY
NSS CELL, ANNA UNIVERSITY CHENNAI
AND
AMS COLLEGE OF ENGINEERING, CHENNAI

Test your IQ….

1. The botanical name for brinjal is
2. The botanical name for onion is
3. The study of sound is called
4. The study of heavenly bodies is called
5. The study of tissues is called
6. Electric Lamp was invented by
7. The fear of crowd is called
8. The fear of books is called
9. The fear of going to bed is called
10. The symbol of gold is
11. The symbol of sodium is
12. The symbol of Sr stands for
13. The symbol Rb stands for
14. The symbol Md stands for
15. Calcium sulphate is commonly called
16. Sodium carbonate is commonly called
17. Sodium chloride is commonly known as
18. The chemical name of Chloroform is
19. The chemical name of baking powder is
20. The chemical name of bleaching powder is

Answers

1. Solanum melongenal
2. Allium Cepa
3. Acoustics
4. Astronomy
5. Histology
6. Thomas alva Edison
7. Ochlophobia
8. Bibliophobia
9. Clinophobia
10. Au
11. Na
12. Strontium
13. Rubidium
14. Mendelevium
15. Plaster of Paris
16. Washing Soda
17. Common Salt
18. Trichloromethane
19. Sodium bicarbonate
20. Calcium hypochlorite

GOVERNMENT AND AFFILIATED COLLEGES

SPONSORED PROJECTS

VELAMMAL ENGINEERING COLLEGE

Name of Coordinator	Title of the Project	Funding Agency	Amount Sanctioned (Rs. in lakhs)	Duration (years)
Vidyavathy Balraj	Large scale preparation of phosphor for medicinal dosimetry LiF:Mg, Cu, P	BRNS	45.5	3

PAPER PRESENTATIONS

INTERNATIONAL CONFERENCES / SEMINARS / SYMPOSIA / WORKSHOPS

NATIONAL ENGINEERING COLLEGE

Subburaj.P, **Maheswari.R.V**, **Kalaivani.L** and **Sivakami.P**, "Surface discharge analysis of insulators in EHV/UHV line", Conference on Energy Engineering, conducted by Pondicherry Engineering College, Puducherry from 7th to 9th January 2009.

Ravindran.M and **Karthik.R**, "Energy conservation in AC and DC motors", Conference on Energy Engineering, conducted by Pondicherry Engineering College, Puducherry from 7th to 9th January 2009.

Sivachandran.P, "Comparison of dual rotor and single rotor permanent magnet generator for direct coupled stand alone wind energy systems", Conference on Energy Engineering, conducted by Pondicherry Engineering College, Puducherry from 7th to 9th January 2009.

SHRI ANGALAMMAN COLLEGE OF ENGINEERING AND TECHOLOGY

Sahaaya Arul Mary.S.A, "Time aware and weighted fault severity based metrics for test case prioritization", Conference on Sensors, Security, Software and Intelligent Systems, conducted by Coimbatore Institute of Technology, Coimbatore on 9th January 2009.

VELAMMAL ENGINEERING COLLEGE

Rajeswari.K, "An improved fuzzy sliding mode controller for vehicle suspension system", Conference on Trends in Industrial Measurements and Automation, conducted by Madras Institute of Technology, Anna University Chennai from 4th to 6th January 2009.

Thiruppathi.K, "New auxiliary circuit ZCS DC-DC converter ideal, simulated hardware implementation and comparison", Conference on Trends in Industrial Measurements and Automation, conducted by Madras Institute of Technology, Anna University Chennai from 4th to 6th January 2009.

NATIONAL CONFERENCES / SEMINARS / SYMPOSIA / WORKSHOPS

ERODE SENGUNTHAR ENGINEERING COLLEGE

Srinivasan.G, **Prince Immanuel.V** and **Nachimuthu.S.K.A**, "Production of bio-hydrogen using maize with bacillus species strain", Conference on Recent Trends in Chemical Engineering and Biotechnology, conducted by Arulmigu Meenakshi Amman College of Engineering, Kanchipuram on 27th February 2009.

INFANT JESUS COLLEGE OF ENGINEERING

Rangaswamy.A, "Information technology in banking services", Conference on IT Enabled Management, conducted by Anna University, Tirunelveli on 3rd April 2009.

K.S. RANGASAMY COLLEGE OF TECHNOLOGY

Vimala.M, "Bamboo bandages using natural herb's – An overview", Conference on Speciality Textile Machines and Mechanics, conducted by K.S. Rangasamy College of Technology, Thiruchengod on 18th February 2009.

Vimala.M and **Gobi.N**, "Carbon nano fibrous materials and its applications", Conference on Speciality Textile Machines and Mechanics, conducted by K.S. Rangasamy College of Technology, Thiruchengod on 18th February 2009.

Magesh Kumar.P, "Specialty yarn manufacturing (zari yarn) and offline testing", Conference on Speciality Textile Machines and Mechanics, conducted by K.S. Rangasamy College of Technology, Thiruchengod on 18th February 2009.

Durairaj.S, "A study on optimization of knitting structure and properties of fleece fabrics", Conference on Speciality Textile Machines and Mechanics, conducted by K.S. Rangasamy College of Technology, Thiruchengod on 18th February 2009.

NATIONAL ENGINEERING COLLEGE

Kannayeram.G, "Partial discharge and dielectric loss measurement on high voltage cable insulation", Conference on Advanced Technologies in Electrical Engineering, conducted by Kamaraj College of Engineering and Technology, Virudhunagar on 18th March 2009.

VELAMMAL ENGINEERING COLLEGE

Chidambaram.P and **Angala Parameswari.G**, "Power flow improvement by STATCOM", Conference on Emerging Trends in Electrical Engineering, conducted by Sri Sai Ram Engineering College, Chennai on 12th February 2009.

Subramani.C and **Anuja.T.A**, "Simulation technique for voltage stability analysis and contingency ranking in power systems", Conference on Emerging Trends in Electrical Engineering, conducted by Sri Sai Ram Engineering College, Chennai on 12th February 2009.

Bharathi.R and **Pranesh Jonathan.J**, "Fast real time implementation of service restoration of power distribution system", Conference on Emerging Trends in Electrical Engineering, conducted by Sri Sai Ram Engineering College, Chennai on 12th February 2009.

Narayana Bhaskar.P and **Murugan.R.M**, "Improvement of power equality using shunt active filter for the elimination for current harmonics", Conference on Emerging Trends in Electrical Engineering, conducted by Sri Sai Ram Engineering College, Chennai on 12th February 2009.

Arun Bhaskar.M and **Satheesh Kumar.T**, "Voltage profile improvement using static var compensator", Conference on Emerging Trends in Electrical Engineering, conducted by Sri Sai Ram Engineering College, Chennai on 12th February 2009.

Anitha Julian, "A survey on applications of game theory in ad-hoc networks", Conference on Cryptography and Network Security, conducted by Vellore Institute of Technology, Vellore on 18th & 19th February 2009.

Leena Jasmine.J.S, "Identification of microcalcification clusters in digital mammograms based on wavelet analysis and neural network", Conference on Very Large Scale Integration, conducted by Velammal Engineering College, Chennai on 26th February 2009.

Mahaboob Basha.S, "Automatic signature recognition and verification using principal components analysis", Conference on Very Large Scale Integration, conducted by Velammal Engineering College, Chennai on 26th February 2009.

Suchetha.M, "Detection and removal of line scratches using wavelet transform", Conference on Very Large Scale Integration, conducted by Velammal Engineering College, Chennai on 26th February 2009.

Suchetha.M, "Neuromime in VLSI using PSPICE and VHDL", Conference on Very Large Scale Integration, conducted by Velammal Engineering College, Chennai on 26th February 2009.

Sujatha.R, "Test pattern generation for dynamic power reduction in combinational part during VLSI circuit testing", Conference on Very Large Scale Integration, conducted by Velammal Engineering College, Chennai on 26th February 2009.

Usha Rani.M, "An iris recognition system to enhance a security based on wavelet theory", Conference on Very Large Scale Integration, conducted by Velammal Engineering College, Chennai on 26th February 2009.

Mary Joans.S, "Digital design and implementation of CDMA in FPGA", Conference on Very Large Scale Integration, conducted by Velammal Engineering College, Chennai on 26th February 2009.

Leena Jasmine.J.S, "FPGA realization of lifting based forward discrete wavelet transform for image processing", Conference on Very Large Scale Integration, conducted by Velammal Engineering College, Chennai on 26th February 2009.

Sujatha.R, "Synchronization in OFDM for wireless communication", Conference on Very Large Scale Integration, conducted by Velammal Engineering College, Chennai on 26th February 2009.

Grace Shoba.S.J, "An efficient FPGA architecture for real time object tracking", Conference on Very Large Scale Integration, conducted by Velammal Engineering College, Chennai on 26th February 2009.

Mahaboob Basha.S, "Low cost hardware test pattern generation for BIST", Conference on Very Large Scale Integration, conducted by Velammal Engineering College, Chennai on 26th February 2009.

Shanmuganandan.K.J, "Reduction of irrelevant datas in multichannel using critical points", Conference on Very Large Scale Integration, conducted by Velammal Engineering College, Chennai on 26th February 2009.

PAPER PUBLICATIONS IN JOURNALS

INFANT JESUS COLLEGE OF ENGINEERING

Rangaswamy.A (2009), "B2B E-Commerce: Utilizing electronics market paces for procurement", Journal of Marketing, Vol.XXXIX, No.2, pp 31-40.

K.S. RANGASAMY COLLEGE OF TECHNOLOGY

Kanagaraj.N, **Kumar.R** and **Sivashanmugam.P** (2009), "A robust intelligent PID-type fuzzy control structure for pressure control", Journal of Chemical Engineering Communications, Vol.196, No.3, pp 291-304.

Kanagaraj.N, **Sivashanmugam.P** and **Paramasivam.S** (2009), "A fuzzy logic based supervisory hierarchical control scheme for real time pressure control", Journal of Automation and Computing, Vol.6, No.1, pp 88-96.

V.L.B. JANAKIAMMAL COLLEGE OF ENGINEERING AND TECHNOLOGY

Ravindran.R (2009), "A crystallographic texture perspective formability investigation of Al 5052 alloy sheets at various annealing temperatures", Journal of Materials and Design, No.30, pp 1804-1817.

Ravindran.R (2009), "An analysis of void coalescence in Al 5052 alloy sheets annealed at different temperatures formed under different stress conditions", Journal of Materials Science and Engineering, No.507, pp 252-267.

CONFERENCES / SEMINARS / SYMPOSIA / WORKSHOPS / FACULTY DEVELOPMENT AND TRAINING PROGRAMMES ORGANIZED

NATIONAL

G.K.M. COLLEGE OF ENGINEERING AND TECHNOLOGY

Workshop on "Improving Teaching Methodology and Development" on 24th January 2009, co-ordinated by **Ramaraj.N**.

NATIONAL COLLEGE OF ENGINEERING

Conference on "Emerging Information Technology" on 21st March 2009, co-ordinated by **Mohiadeen Abdul Kadar.S**.

NATIONAL ENGINEERING COLLEGE

Workshop on "Practical Implementation of Digital Image Processing using MATLAB", from 22nd to 24th January 2009, co-ordinated by **Sankar Ganesh.S**.

Technical Symposium on "Componec '09" on 11th & 12th February 2009, co-ordinated by **Roslin.J**.

Conference on "Artificial Intelligence based Electrical Machine and Drives" on 19th & 20th February 2009, co-ordinated by **Kalaivani.L**.

Seminar on "Recent Trends and Issues in Public Key Crypto Systems and Digital Signature" on 20th & 21st February 2009, co-ordinated by **Anantha Kumaran.S**.

Training Programme on "Basics of High Voltage Lab", on 27th February 2009, co-ordinated by **Sivakami.P** and **Maheswari.R.V**.

Conference on "Recent Trends in Instrumentation Applications" on 19th & 20th March 2009, co-ordinated by **Abudhahir.A**.

SSM COLLEGE OF ENGINEERING

Technical Symposium on "ELQUEST '09" on 3rd March 2009, co-ordinated by **Raja.A**.

Technical Symposium on "IRISH '09" on 7th March 2009, co-ordinated by **Ravi.A.T**.

V.L.B. JANAKIAMMAL COLLEGE OF ENGINEERING AND TECHNOLOGY

Workshop on "Multimedia and its Applications" on 16th February 2009, co-ordinated by **Balamurugan.A**, **Aruna.M** and **Nithya.D**.

Seminar on "Computational Intelligence and Image Processing" on 20th February 2009, co-ordinated by **Balamurugan.A**, **Aruna.M** and **Nithya.D**.

VELAMMAL ENGINEERING COLLEGE

Conference on "Very Large Scale Integration" on 26th February 2009, co-ordinated by **Usha Rani.M** and **Mahaboob Basha.S**.

PAPER PRESENTATIONS

ERODE SENGUNTHAR ENGINEERING COLLEGE

B.E. COMPUTER SCIENCE AND ENGINEERING

Shanthini.M and Subhathra.R, "Image Processing", National Level Technical Symposium on DUOFETE '09, conducted by Panimalar Engineering College, Poonamallee on 14th February 2009.

VELAMMAL ENGINEERING COLLEGE

M.E. APPLIED ELECTRONICS

Priya Stalin, "FPGA realization of lifting based forward discrete wavelet transform for image processing", Conference on Very Large Scale Integration on 26th February 2009.

Rosi.A, "Synchronization in OFDM for wireless communication", Conference on Very Large Scale Integration on 26th February 2009.

Mohan Kumar.N.S, "An efficient FPGA architecture for real-time object tracking", Conference on Very Large Scale Integration on 26th February 2009.

Manjula H.S, "Low hardware test pattern generation for BIST", Conference on Very Large Scale Integration on 26th February 2009.

Suresh.N, "Reduction of irrelevant data in multichannel using critical points", Conference on Very Large Scale Integration on 26th February 2009.

NSS

ERODE SENGUNTHAR ENGINEERING COLLEGE

Organized a Blood Donation Camp on 27th February 2009.

K.S. RANGASAMY COLLEGE OF TECHNOLOGY

Organized an NSS camp at Keelaripatti and Pudhupalayam from 20th to 26th February 2009.

The Syndicate of Anna University Chennai in its 194th meeting held on 04.02.2009 approved the award of Ph.D. degree to the following research scholars.

FACULTY OF MECHANICAL ENGINEERING

1.	Ramabalan.S	Evolutionary trajectory planning for intelligent robots
2.	Madhan Mohan.G	Development of an ergonomic risk assessment tool for foundry environment
3.	Girish B.S	Population based search heuristics for scheduling job shops associated with multiple routings
4.	Ramadoss.R	Numerical and experimental investigations on forming limit analysis for AISI 316,316L, and 316LN austenitic stainless steels
5.	Balaji.A.N	Genetic and simulated annealing algorithms for fixed charge transportation models

FACULTY OF ELECTRICAL ENGINEERING

6.	Jesu Christopher.J	Assessment of Mechanical strength components of human femur trabecular bone using texture analysis, wavelets and neural networks

FACULTY OF INFORMATION AND COMMUNICATION ENGINEERING

7.	Paul Vanna Nayaki.M	A novel optoelectronic sensor system for corrosion mapping of metallic surfaces
8.	Sundararajan.J	A study on non- invasive sensing techniques for blood glucose quantification
9.	Helenprabha.K	Performance analysis and FPGA implementation of adaptive signal processing algorithms for fetal electrocardiogram signals
10.	Sivanatha Raja.A	Design and development of colour measurement techniques for colourimetric devices to assay the blood samples
11.	Lakshmi.K	Novel feature weighting schemes and similarity measures for automatic text categorization

FACULTY OF TECHNOLOGY

12.	Saravana Thamizhan.R	Residence time distribution modeling for parallel plate electrochemical reactor
13.	Tamil Selvan.A	Feasibility of enzyme technology using bacterial lipid modification enzyme, phosphatidyl glycerol, prolipoprotein diacylglyceryl transferase

FACULTY OF SCIENCE AND HUMANITIES

14.	Nanda Kumar.A.K	Preparation and characterization of TiNi thin films
15.	Geetha Sivaraman	Fuzzy mathematics and its applications
16.	Lavanya.A	Immobilization of trypsin and alpha amylase and their applications

FOREIGN VISITORS

Prof.Wei-Tsuen Chen, President, National Tsing Hua University, Taiwan, along with a seven member delegation discussed with Dr.P.Mannar Jawahar, Vice-Chancellor, Anna University, Chennai and with faculty members of Anna University Chennai on 31st March 2009 to formulate the MoU for bilateral research and academic cooperation.

NATIONAL SEMINAR ON "ENGLISH AND COMMUNICATION SKILLS" FOR EMPLOYABILITY

ANNA BIRTH CENTENARY YEAR
TWO - DAY NATIONAL SEMINAR ON
"English and Communication Skills for Employability"
25th - 26th March 2009
Organised by
Department of Mechanical Engineering
Anna University

English is a window to the world and its importance is undeniable in the present day situation. In view of employability, English holds the key to many lucrative professions. Considering the important role that English plays, the Department of English, Anna University Chennai, organized a two-day National Seminar on "**English and Communication Skills for Employability**" on 25th and 26th March, 2009. Around two hundred participants from various parts of India registered for the Seminar. The Vice-Chancellor Dr.P.Mannar Jawahar, in his inaugural address, spoke on the proficiency in English for students going abroad for advanced studies, research and jobs and pointed out that it was indispensable for those who seek jobs in reputed multi-national companies. He stressed that in advancing the employability skills of the students, the educational institutions could play a significant role in providing infrastructure facilities, sophisticated equipment and qualified faculty to ensure quality education. He also emphasized the necessity of bringing about desirable modifications to suit the needs of the industries in order to transfer academic skills to the workplace.

Mr.Celestine Paulraj, Manager, Organization Learning, Standard Chartered Scope International, in the keynote address spoke on *Velocity Zone, Motivation and Change* to be introduced in classrooms to ensure better teaching – learning situation. The Panel Discussion of the ELT experts with Dr.Peter Francis added valuable input to all participants. Professor K.Senthilathiban, Founder and Director of Sparks Development Group highlighted *Effective Interpersonal Communication* which would help people in places of employment. The Department received over 170 abstracts and nearly 160 papers were presented on different topics like *i) English and Employability ii) Oral and Written Skills iii) Non-Verbal Skills iv) Inter-personal Communication and v) Industry Participation in Training Teachers and Students*. The topics received wide appreciation and good participation. The seminar was fruitful in enabling the teachers to carry fresh and innovative ideas on inculcating English and Communication Skills in students and to prepare them for their future career.

RESEARCH CENTRES OF EXCELLENCE

CENTRE FOR ENVIRONMENTAL STUDIES

The Department of Public Health Engineering which was established in the year 1955, with the assistance from the World Health Organization (WHO) and was upgraded into the Centre for Environmental Studies (CES) in 1982. The Centre for Environmental Studies, Anna University, has made significant contribution in Environmental Education, Research and extension activities for the past 50 years.

MISSION STATEMENT

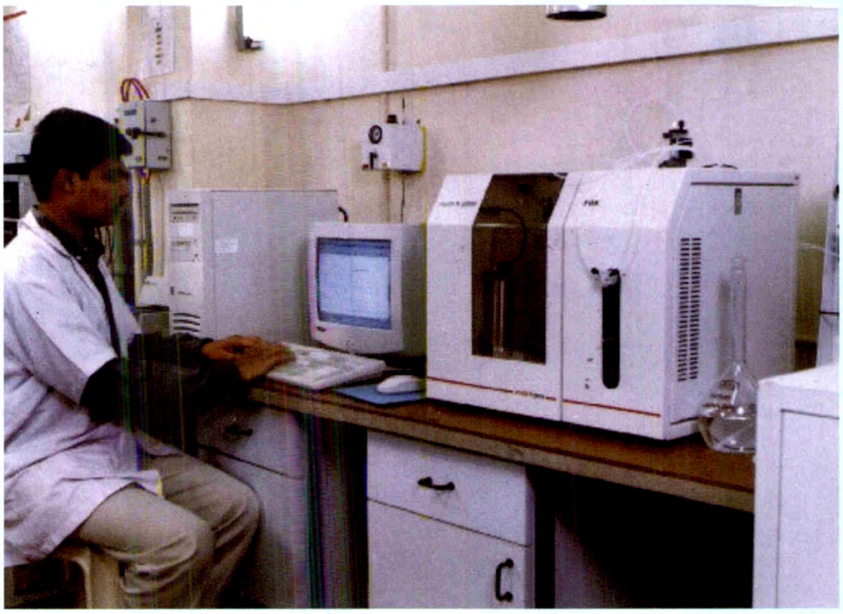
We at Centre for Environmental Studies shall strive constantly

- To educate the future leaders of the environmental profession and to inculcate skills and foundations for life-long learning and growth.
- To conduct research and create new knowledge as an integral part of our education programme and the continued renewal of the profession.
- To contribute towards sustainable management and utilization of natural resources, combat and reduce pollution of air, water and soil, enhance technical management knowledge and develop and promote technology for sustainable management.

With well qualified faculty and state-of-the art laboratory facilities as its main strengths, the CES has produced well trained environmental engineers and scientists who occupy key positions in environmental organizations. Every year, about 50 such engineers and scientists pass out from CES, with Master's level specialization in environmental engineering, science and management. The following academic programmes are offered:

- Master's Degree in Environmental Engineering
- Master's Degree in Environmental Management
- Master's Degree in Environmental Management (Part-time)
- Master's Degree in Environmental Science
- Doctor of Philosophy in Environmental Engineering
- Doctor of Philosophy in Environmental Science
- M.S. by Research in Environmental Engineering
- M.S. by Research in Environmental Science

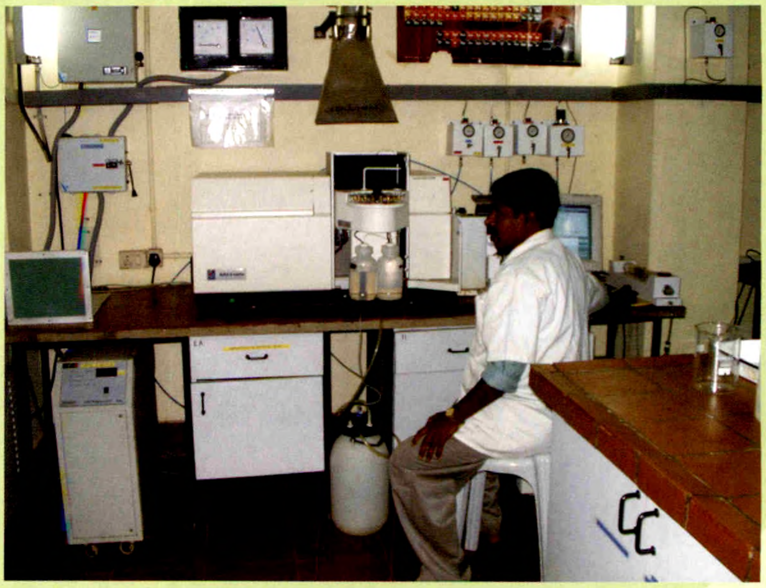
In addition, need based specialized training programmes organized for inservice engineers from Government Departments and industries. Through these programmes more than 1500 public health engineers of various state Governments have been trained so far.



Instrumentation Laboratory

Research and Development (R&D)

The Centre is involved in fundamental and applied research work. Assessment of chemical and biological characteristics of water bodies, treatment and reuse of wastewaters, degradation of toxic wastes such as phenol, removal of toxic pollutants by aquatic plants, biomass productivity, management of solid wastes as well as landfill management and treatment of high TDS industrial wastewaters are some of the areas of investigation at the Centre. Other thrust areas include, microbial degradation of toxic pollutants, environmental impact assessment of developmental projects in the region, membrane processes for industrial wastewater treatment and byproduct recovery, cost effective design of water distribution systems, remote sensing applications in environmental studies and ground water contamination and solute transport modeling.

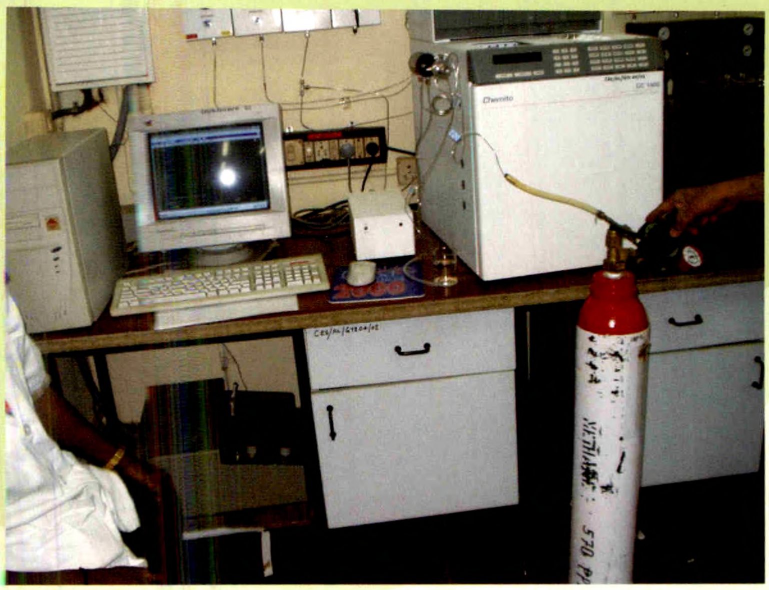


Wet Chemistry Laboratory

Various National/International agencies like DST, MoEF, Ministry of Urban Development, UNDP, University Grants Commission, Tamil Nadu Water Supply and Drainage Board, Council for Scientific and Industrial Research, Central Pollution Control Board and Tamil Nadu Pollution Control Board fund sponsored research activities. CES has been able to attract national and international attention with generous funding for infrastructure development, research and extension activities. The following are note worthy in this aspect:

- Indo-German Development Co-operation project
- Asian Regional Research Program on Landfill Management funded by SIDA
- UGC-DSA SAP Programs
- DST-FIST Programs
- UGC-DSA-COSIST Programs
- MOEF funded Environmental Information Project
- UGC funded Centre with Potential for Excellence in Environmental Sciences
- Memorandum of understanding with International agencies such as
    - German Technical Cooperation (GTZ)
    - Bremen Overseas Research and Development Association, Germany
    - Institute National de la Research Agronomique, France
    - University of Applied Sciences, Sudenberg, Germany
    - University of Hannovar, Hannovar, Germany
    - University of Luneberg, Germany
    - Centre for International Migration, Germany

- Bremen Overseas Development Cooperation Agency, Germany
- Sewedish International Development Agency
- Institute for Global Environmental Strategies (iGES) Japan



Instrumentation Laboratory

The State-of-the art laboratories of CES are used to conduct in-house research programmes leading to Ph.D. Degree in Environmental Science and Engineering. So far, the CES has produced 30 Ph.D. scholars and currently 40 are working for Ph.D.

CES laboratories have been recognized by Central Pollution Control Board, Ministry of Environment and Forests, Government of India, as 'Environmental Laboratory' under Section 12(1) B of Environment (Protection) Act 1986.

The following are the details of the Projects (last five years)

Sponsored Research Projects completed - 5 Nos. - Rs.80.00 Lakhs

Sponsored Research Projects ongoing - 19 Nos. - Rs.60.00 Lakhs

Technical Consultancy Services

The expertise and laboratory facilities are extensively utilized by Government Departments, Pollution Control Boards and Industries for Environmental Quality Monitoring, Industrial Wastewater treatment studies, Hazardous Waste management studies, Environmental Impact Assessment and solid waste management studies.

Major Technical Service Applications

The following are the note worthy major technical service applications:

- Pollution control by providing assistance in common effluent treatment plant installation.
- Pollution control in textile industries in Tirupur by providing Education on waste minimization concepts.
- Pharmaceutical Industry wastewater pollution control by development and transfer of appropriate technology.
- Sustaining water quantity and quality in Ooranies by providing appropriate engineering concepts.
- Pollution control in Chennai city waterways by providing technical assistance to Chennai Metropolitan Water Supply and Sewerage Board.
- Control of pollution at solid waste dumpsites by R & D on conversion of dumpsites into sanitary landfill.

Consultancy Projects Completed during the last five years : 82 Nos. – Rs.250 Lakhs

Consultancy Projects ongoing : 28 Nos. – Rs.120 Lakhs

Extension Programmes

The Centre organizes conferences/seminars/symposium/workshops on topics of current importance. Some of the recent programmes were on Sustainable Landfill Management, Hazardous waste management, Membrane technologies for wastewater reclamation, Decentralised Waste treatment systems, Environmental Management Systems and Anaerobic Treatment Technologies, Municipal Solid Waste Management and River Water Management.

HIGHLIGHTS OF FEW PROJECTS COMPLETED/ONGOING:

1. ENVIRONMENTAL IMPACT ASSESSMENT OF CONSTRUCTION OF THE NEW TAMIL NADU LEGISLATIVE ASSEMBLY COMPLEX AT OMANDURAR GOVERNMENT ESTATE, CHENNAI

During the Golden Jubilee Celebrations of **"Kalaigner in Legislative Assembly"** on 12.05.2007, the Hon'ble Chief Minister of Tamil Nadu in his acceptance speech to the felicitation and in response to the demand of the Leaders of political parties in the Legislative Assembly, announced that a new complex for the Legislative Assembly will be constructed. The Government in GO MS No.229, Public Works Department, dated 22.07.2008 have approved an plinth area of 87,058 m^2 for the Tamil Nadu Legislative Assembly Complex. The proposed building is a RCC framed structure with ground floor and six floors ultimate. The total built up area is 87,058 m^2 on a total land area of about 3,01,128 m^2.

2. ENVIRONMENTAL IMPACT ASSESSMENT OF CONSTRUCTION OF MODERN STATE LIBRARY IN KOTTURPURAM, CHENNAI

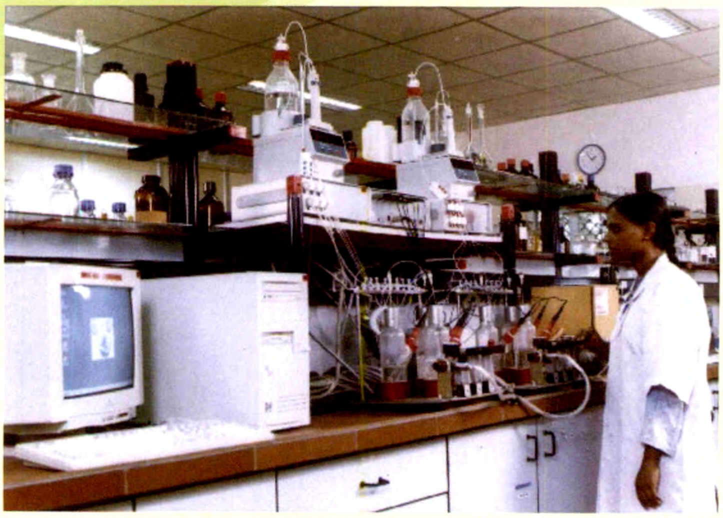
The Government of Tamil Nadu has announced the construction of a building for the Modern State Library at Kotturpuram for the benefit of scholars and public. This project will be with all facilities which will be equal to the Global standards.

3. FEASIBILITY STUDIES ON THE BIOREMEDIATION OF CONTAMINATED WATER BODIES APPLICATION OF EFFECTIVE MICROORGANISMS

Many water bodies in the Tamilnadu State is contaminated by the discharges from domestic sources and industrial sources. The Govt. of Tamilnadu is keen to renovate these water bodies and is keen to identify the best possible way to achieve this. In this connection, the Municipal Administration and Water Supply Department, Government of Tamilnadu entrusted a project on the "Feasibility Studies on the Bioremediation of Contaminated Water bodies by Application of Effective Microorganisms" to CES.

4. RENOVATION OF VILLAGE PONDS FOR DRINKING WATER SUPPLY

The project titled Renovation of Ooranies and Ponds is originally funded by Rural Development Department, Tamil Nadu but has been recently taken over by Tamil Nadu Water and Drainage Board. This Project is running since 2003. In the recent years the ground water bodies are under enormous stress due to overexploitation. A gradual decrease of water level can be observed since 20 years back when first dug wells become dry. Therefore the Government has decided in its water policy to enhance the use of non-conventional sources to increase utilizable water resources, like rainwater harvesting. In this connection, the Government of Tamil Nadu has awarded a project to evolve a methodology of Ooranies construction and operation to ensure adequate water and ensure water quality.



Microbiology Laboratory

5. MONITORING AND DATABASE MANAGEMENT OF WATERWAYS OF CHENNAI CITY

The project titled "Monitoring and database Management of Waterways of Chennai City" is being funded by Ministry of Environment and Forests under the National River Conservation Programme (NRCP). This project is running jointly by Centre for Environmental Studies and Institute for Ocean Management since April 2005.

6. ECOLOGICAL MONITORING FOR ADYAR POONGA

The Project titled "Ecological Monitoring for Adyar Poonga" is funded by Tamil Nadu Urban Development Fund on behalf of Adyar Poonga Trust. This activity was started by Centre for Environmental Studies in January 2007 providing baseline data for the Master Plan of Adyar Poonga and in a second step to support the Master Plan Development with technical-scientific input. The current project is focused on the environmental monitoring of the restoration process of Adyar Poonga, where CES is playing the prominent function as a monitoring agency but parallel consults TNUDF in its technical advisory committee.

7. IMPROVEMENT OF DRINKING WATER QUALITY FROM SURFACE WATER PONDS BY APPLYING ZERO ENERGY TECHNOLOGIES

The Project titled "Improvement of Drinking Water Quality form Surface Water Ponds by Applying Zero Energy Technologies" is funded by the Department for Drinking Water Supply, GoI and is a 2 year research programme

The main objective of the proposal is to provide safe drinking water in rural areas from surface water sources. For this purpose various technologies will be tested, which are not relying on electrical energy from the grit but can function as independent stand-alone systems.

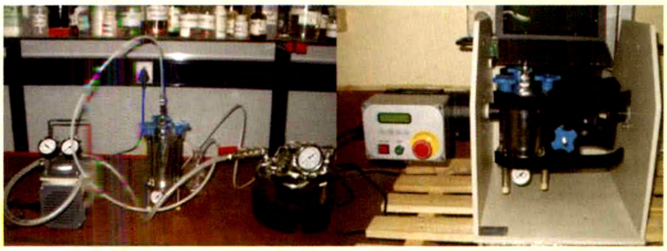
8. STUDIES ON GAS CHLORINATION FOR COLOUR REMOVAL IN TEXTILE DYEING INDUSTRIES IN TAMIL NADU

In order to eliminate the problem of sludge management, at present, some Textile Dyeing Units in the Textile Belt of Tamil Nadu are adopting 'Gas Chlorination' as Colour Removal Technology. Recently, the Honorable High Court of Madras has directed the Tamil Nadu Pollution Control Board 'to review the use of chlorine and its storage procedures in the industrial sector and to ensure that the best available technology is adopted for colour removal and health of community is not put at risk due to adoption of low-cost substandard solution'. In this context, the Tamil Nadu Pollution Control Board (TNPCB) has mandated the Centre for Environmental Studies, Anna University, Chennai to conduct an expert study on Gas Chlorination in Textile Dyeing Industries, Tamil Nadu.

9. PREDICTION OF OCEANIC DISPERSION OF RADIONUCLIDES RELEASED FROM MAPS INTO THE COASTAL WATERS OF KALPAKKAM - Funded by Atomic Energy Regulatory Board, Bombay, 2005-2008

Rapid economic development in coastal zones usually involves large-scale land reclamation, construction of port and harbour facilities, and other changes of coastal line, which may cause alteration of local equilibrium circulation patterns. Ocean is an interactive system that includes hydrodynamic characteristics (e.g., water depth and flow velocity), chemical characteristics (e.g., solids, dissolved oxygen, and nutrients), and characteristics associated with the biological community of the water column and benthos.

Various data inputs are required in order to set-up, calibrate and validate a hydrodynamic numerical model. MIKE 21 is widely used for modeling the hydrodynamics, transport of pollutants, thermal plumes and water quality parameters in coastal waters. The model provides a transient solution for shallow water bodies and it is capable of accommodating irregular coastline, complex bathymetry and open boundaries.



Unit Operation and Processes Engineering Laboratory

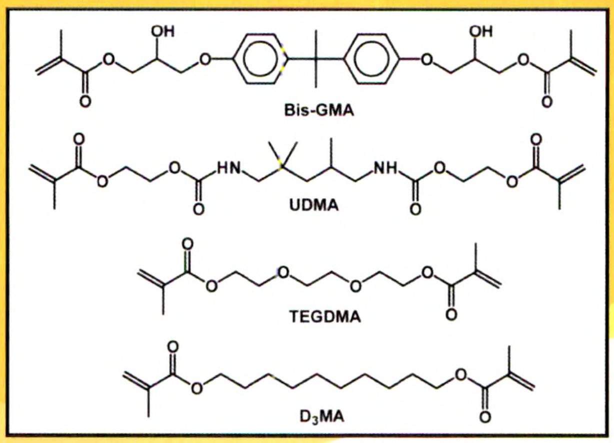
Polymers in medicine

Introduction

Polymers have wide applications in medicine. They have applications ranging from prosthesis to scaffolds for drug delivery and tissue engineering. They are also used as hemodialysis membranes. Further, polymers have been used as matrix for fabricating organic – inorganic composites.

Polymers in medicine have been classified as Synthetic polymers and natural polymers. Synthetic polymers used are acrylates, Polytetra fluoro ethylene, polyethylenes, polysulfones, etc. Natural polymers that are in wide usage in medicine include silk, collagen, chitosan, poly(D,L-lactide-co-glycolide) etc. Polymers are further classified as biodegradable and non-biodegradable polymers based on their character to degrade within the body.

Smart polymers are a group of polymers that are responsive to stimuli. The stimuli could either be change in temperatures (acrylates), pH (Chitosan), light (poly(N-vinyl carbazole)), or a combination of them. Recent advances in the design of stimuli responsive polymers have created opportunities for novel biomedical applications. Stimuli-responsive changes in shape, surface characteristics, solubility, formation of intricate molecular self-assembly and sol–gel transition have enabled several novel applications in the delivery of therapeutics, tissue engineering, cell culture, bioseparations and sensor or actuator systems.



Examples of methacrylates used in dentistry

Biocompatibility of polymers

The release of toxic leachables from polymers will adversely affect healing — this toxicology idea is implicit in today's definition of biocompatibility. As developments took place in biology and materials science, biomaterials researchers were quick to incorporate these new ideas into biomaterials. Molecular biology concepts are now opening new frontiers for biomaterials design— a path to biomaterials that will work with the normal physiology and seamlessly integrate into the human body. The appreciation of the host response (healing) of implanted materials helps us understand the performance of today's biomaterials and also aids us in envisioning how we might improve the body's response to biomaterials in the future.

Nonfouling Surfaces

Poly (ethylene glycol) (PEG), also known as poly (ethylene oxide) (PEO), has been most widely studied for its protein and cell resistance. There have been many approaches to attaching PEG to materials and rendering them nonfouling such as through covalent immobilization, adsorption, or interpenetration. A recent novel approach takes advantage of the highly adhesive nature of mussel adhesive protein. Specifically, PEG was covalently attached to the mussel adhesive protein to form a copolymer that exhibited a nonfouling segment and a sticky segment. The sticky segment adhered well to gold and titanium surfaces presenting the PEG chains at the new interface. These modified surfaces were found to resist cell adhesion for up to 2 weeks in vitro.

A recent study investigated the in vivo response of untreated fluorinated ethylene propylene copolymer (FEP) and FEP treated with plasma-polymerized tetraglyme when implanted subcutaneously in the backs of mice. After 4 weeks, a fibrous capsule had formed around all the implants. The capsule thickness was similar regardless of treatment. Interestingly, macrophage adhesion was significantly higher in the tetraglyme-treated samples compared with the untreated samples. This study further confirms the differences between in vitro and in vivo responses. It was hypothesized that the tetraglyme surface binds very little protein in vivo, as seen in vitro, but that the conformation, not quantity, of the adsorbed protein may promote the foreign body response.

Hydrogels

Hydrogels are crosslinked polymer networks that are insoluble but swellable in aqueous medium. These materials offer an environment that resembles the highly hydrated state of natural tissues, making them excellent candidates for tissue engineering and drug delivery. Several types of crosslinking mechanisms have been investigated to develop hydrogels for tissue scaffolds and drug delivery devices. These mechanisms include ionic (e.g., alginate), physical (e.g., pluronics and peptide self-assembling gels described in the section on Self-Assembled Biomaterials, below), chemical (e.g., fibrin glue and multivinyl methacrylate and acrylate derivatives), and hydrogen bonding.

Hydrogels that are chemically crosslinked via a radical-initiated chain polymerization of multivinyl monomers or macromers have gained considerable interest because of their chemical versatility and ease of fabrication. The polymerization reaction of methacrylate- or acrylate [(meth)acrylate]-modified macromers can be initiated using photoinitiators or redox initiators under physiological pH and temperature enabling in situ formation. Photoinitiators offer spatial and temporal control over the polymerization process allowing for fabrication of complex 3-D shapes, whereas redox initiators (e.g., ammonium persulfate and vitamin A) are typically milder and potentially less toxic.

In general, crosslinked hydrogels afford tight control over the final gel chemistry, macroscopic properties, and degradation. Simple changes in the processing conditions (e.g., macromer concentration, macromer molecular weight) can lead to a range of gel properties, whereas simply mixing different macromers in solution prior to polymerization can lead to networks that contain both synthetic and natural components.

Applications

Prosthesis

Polymers have a history of application in medicine in replacing missing or defective human body parts. One of the finest examples is intra ocular lenses made of poly methyl methacrylate

(PMMA). Natural polymers such as collagen has also been used to replace defective cardiac valves. A large section of the geriatric society in today's world experience osteoporosis/arthritis and related hip or knee joint pain which necessitates their replacement. The common hip joint replacement polymer is ultra high molecular weight polyethylene (UHMWPE). PMMA bone cements are used to cement the prosthesis to the natural bone. Vascular grafts also use PTFE. These grafts are usually designed to function additionally as drug releasing devices or are surface modified using heparin so as to reduce the immune response of the host towards these implantable materials. Dental application of polymers use acrylates mainly in the areas of dentures and restoration of decayed teeth. Alginates and silicones have found favour in recording the details of the jaws and facial bones (impression making).

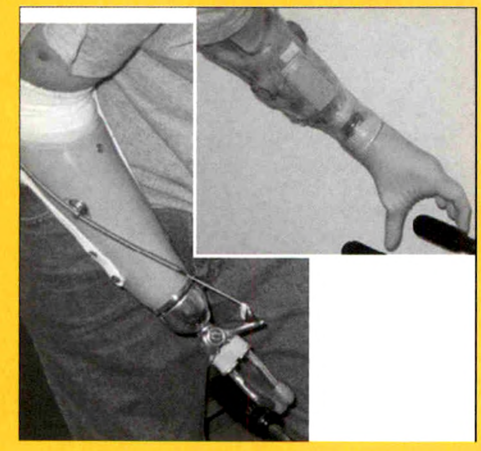


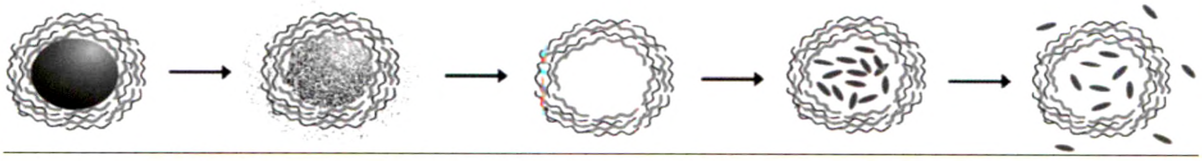
Photo showing hand prosthesis

(Source: Buddy D. Ratner, Introduction to biomaterial science, 2nd Edition, 1998, Elsevier Academic press)

Drug delivery devices

Drug delivery devices have a tremendous scope in the areas of therapeutics for chronic systemic diseases and disorders like diabetes, cancer, hypertension, infections, etc. Most of the polymers used as scaffolds are biodegradable which are excreted out of the body unlike non degradable polymers which necessitate removal of the scaffold by surgery subsequent to the expiry of its application. Smart polymers are ideal drug delivery devices as they are designed to make use of the body conditions to regulate the drug release.

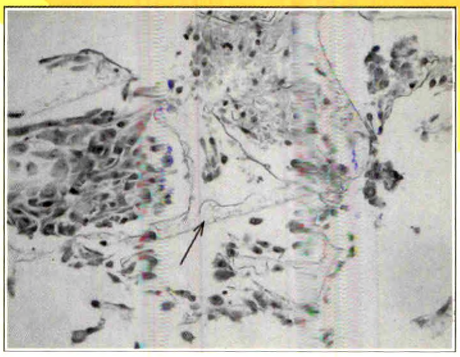
Temperature responsive polymers can be made to release anti – pyretic and analgesic drugs such as aceclofenac and ibuprofen when there is an increase in the body temperatures. Hydrogels with attached glucose receptors can be used to regulate the insulin release depending on the blood glucose levels. Light activated polymers are useful in drug release applications for skin and eye.



Scheme of fabrication of functional hollow polyelectrolyte shells and loading of biomacromolecules. (Source: Paul K. Chu, Xuanyong Liu, Biomaterials fabrication and processing handbook. CRC Press, 2008).

Tissue engineering

Biodegradable porous polymeric scaffolds, which support and direct generation of a tissue by the seeded cells, may be also associated with undesired effects, such as inflammatory response to the implanted materials. A novel approach known as cell sheet engineering has recently been developed to avoid such complications. It is based, either on direct transplantation of cell sheets to the host tissues, or generation of 3D structures, via assembly of individual cell sheets. Cell tissue engineering utilizes temperature responsive intelligent surfaces of various acrylamides. This technique may enable one to overcome problems encountered in recreating various tissues and organs and establish a new basis for regenerative medicine. Among natural and synthetic polymeric materials which have been found to be suitable for tissue engineering applications, special attention has been given recently to chitosan derivatives in combination with various polysaccharides.



Light microscopy images of MG63 bone cells growth in a PLLA scaffold for 4 weeks (H&E staining) with 200× magnification. The arrow points to the porous wall of the PLLA scaffold.

(Source: Paul K. Chu, Xuanyong Liu, Biomaterials fabrication and processing handbook, CRC Press, 2008.).

The future

Two technologies, tissue engineering and regenerative medicine, both in development now, will ultimately revolutionize medical implants. Tissue engineering will allow replacement of many tissues and organs with living, functional replacements. Tissue-engineering advances will rest upon advances in biodegradable polymers, rapid prototyping, drug delivery, cell culture, stem cell methodologies, angiogenesis, and biomimetic strategies for recreating extracellular, matrix-like biomimetics. Also, advances in cell culture, gene delivery, cell and tissue storage, sterilization, and surgery will be needed to fully realize the potential of tissue engineering. Regenerative medicine, permitting in vivo regeneration of whole organs and tissues, will ultimately replace tissue engineering. Technologies important to making regenerative medicine a reality include advances in biology, gene delivery, and controlled release.

Mr. K. Aravind, Research Scholar, Department of Chemistry

Dr. D. Sangeetha, Senior Lecturer, Department of Chemistry

Anna University Chennai.

NANOTECHNOLOGY – A TINY REVOLUTION

Nanotechnology is a global phenomenon, with critical research being done, and discoveries being made around the world. Our ability to work on the nanoscale is blossoming. Nanotechnology will change the world and people are racing to become a part of the new craze, launching web sites, special reports, companies, and products with the nano prefix. Both nanoscience and nanotechnology address the manipulation of matter at the smallest scale, of the order of atoms and molecules. Nanotechnology is rapidly evolving and holds the potential to provide unity to science and engineering. For example, a scientist may study the characteristics of thin layers of molecules, and then learn how to apply those molecules to a particular surface, resulting in a new technology. Together, nanoscience and nanotechnology comprise a rapidly growing field of study with significant ramifications to all aspects of human societies around the world.

The synthesis of nanomaterials seems mundane to achieve this tiny revolution, and indeed it could be argued that we've been using them for decades or even millennia (a Roman cup, called the Lycurgus cup, used nanosized gold clusters to create different colors depending on whether it was illuminated from the front or the back), but new composites and coatings are springing up all the time and rapidly moving into the market and generating revenue. What has changed recently is the ability to make nanoparticles out of many materials and exercise strong control over their size, composition and consistency. Several companies have been found based on patents for methods of making nanoparticles or on ways of incorporating them into composites. The industry also has some giants who have been making fine powders for decades. Some companies are gearing up to produce tons a year, although these high volumes are for the multi-walled variety, which don't offer the potential strength in composites of the single-walled variety, production levels for these will soon be reaching the kilogram per day level in some companies.

The tremendous research in nanoscience and technology has shown us many novel techniques to produce nanomaterials on a large-scale but the assembly of these nanomaterials is found to play a vital role in device fabrication. Self-assembly, one of nature's favorite ways of building things typifies an approach in nanotechnology, the bottom-up approach. The self-assembly technique is potential in nanoelectronics, for this reason it could produce just about the densest electronics feasible. It is a part of some of the promising approaches to making molecular memory that may bear fruit in a few years. Building complex structures will require designing systems that self assemble into systems that in turn self-assemble into others, and so on. This is known as hierarchical self-assembly and again typifies the way nature operates. A drawback of self-assembly approaches to date is that they are not that reliable and the results have a much higher rate of variability than with lithographic approaches. An interesting way to get around this is to design software that takes account of the flaws and allows imperfect circuitry to operate reliably, through testing and selection of viable components. Tackling processors is another matter, however, because of the greater complexity involved in this area, self-assembly will likely be combined initially with some more traditional top-down approach, for example, getting molecular components to self-assemble on a patterned substrate in some sort of hybrid system, which many believe will represent the first commercialization of nanoelectronics.

On the other hand organic molecules have also been shown to have the necessary properties to be used in electronics and a single atom transistor was even demonstrated recently. Devices made of molecular components would be much smaller than those made by existing silicon technologies and ultimately offer the smallest electronics theoretically possible without moving into the realm of subatomic particles. The issues of connectivity, and thus mass production, apply to molecular electronics too, but choosing your molecules carefully does offer the potential of using self-assembly to create structures, an approach that could offer great economies.

The advent of nanotechnology is sure to bring a significant but modest revolution, especially in areas of lab-on-a-chip type technologies and it has been already found that NEMS devices have potential application in the telecoms industry. MEMS and NEMS hold promise in the medical field, in little devices controlling the release of a drug, for instance, or even in the control functions of prosthetics, such as artificial hearts. However, it should be noted that where a passive system can perform the same function as an active one, the passive one will normally be less expensive and more reliable. Sometimes, however, an active device makes sense—recently a MEMS device was created that can grip and release individual blood cells without harming them. One can imagine such a device being used in a system to inject genes or other substances into cells. The use of nanotubes as syringes is being experimented. Biomimetic has also emerged as a versatile strategy which can potentially lead to the fabrication and synthesis of newer materials with hitherto unknown applications. Quantum dots and nanoporous silicon both offer the potential of producing tunable lasers where we can choose the wavelength of the emitted light.

Nanotechnology not only leads to miniaturization but also brings in efficiency to the existing technology. The read heads of disk drives already exploit electron spin in an effect called giant magnetoresistance, as does MRAM, which has already seen limited commercial production. An effect called ballistic magnetoresistance has recently been demonstrated to have the capability of producing read heads that can deal with storage densities of a terabit per square inch—ten times the density expected in the next generation of hard drives. Prototype batteries using nanoparticles have also been developed that offer ten times the charge and discharge rate (with 100 times having been suggested as possible at times) of conventional rechargeable batteries. Some improvement in battery capacity per volume (energy density) has also been offered from nanostructured materials, but not a great deal.

Typical silicon-based commercial photovoltaic cells (ones that make electricity from light) have efficiencies of about 15%, with over 30% having been achieved in the laboratory (photosynthesis, by comparison is about 1% efficient) but are very expensive, which has limited their uptake. New organic solar cells offer great price savings but have efficiencies of just a few percent. Recent research, though, has come up with an approach that is more efficient than organic versions, should be very cheap, and that is based on nanorods that can be tuned to respond to different wavelengths of light. This capability to exploit a wider part of the spectrum means that efficiencies matching or exceeding current commercial varieties. Another recent development in this area is a cell that is again cheap to produce, in theory, and that produces hydrogen rather than electricity, with efficiencies of between 5 and 10 percent already achieved and better promised. When looking at renewable energy such as solar, wind and wave power, it mustn't be forgotten that the energy is not always produced when needed and thus there is an important interaction with storage technologies such as batteries or fuel cells.

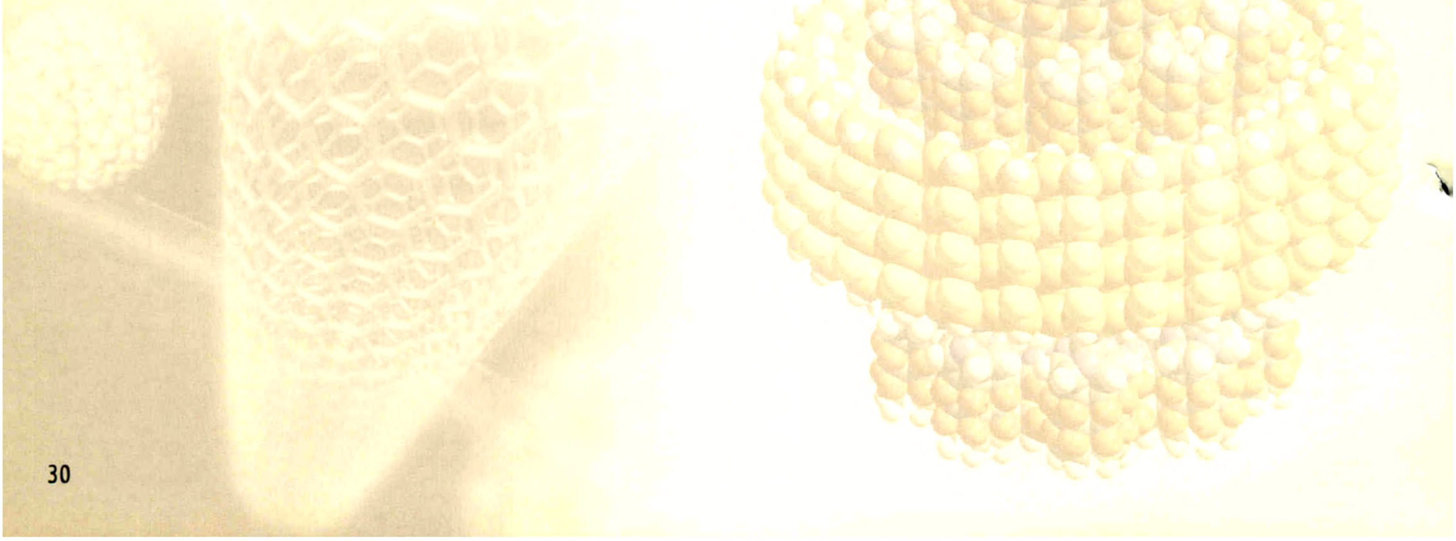
Another fabulous revolution that is much awaited from nanotechnology is quantum computing. It offers staggering potential by virtue of the ability to perform simultaneous calculations on all the numbers that can be represented by an array of quantum bits (qubits). The scale at which quantum effects come into play, the atomic scale, argues for a requirement for nanoscale structures and quantum dots come up regularly in discussions of quantum computing. Primary applications would be in cryptography, simulation and modeling. The realization of a quantum computer is generally believed to be a long way off, despite some very active research.

Though we speak about the revolution that is yet to be brought out by nanotechnology, the one industry that is being impacted by nanotechnology and already hit the market is the textiles industry. Fabrics that are highly resistant to water and stains and wrinkling are already being marketed. Companies are working on "smart" fabrics that can change their physical properties according to surrounding conditions, or even monitor vital signs. The incorporation of nanoparticles and capsules in clothing offers some promise and nanotubes would make extremely light and durable materials.

Applications projected for this new evolution in technology span a broad range from the design and fabrication of new membranes, to improved fuel cells, to sophisticated medical prosthesis techniques, to tiny intelligent machines whose impact on humankind is unfathomable. Many of the concepts that nanotechnology promises to give us may look impossible now, but they may not be so far away after all, nano-storm is likely to catch everyone in the near future. It is widely accepted that with the appropriation of technological innovation generally, nanotechnology promises to bring dramatic and unpredictable changes to human material existence. This is likely to have a significant and differential impact on different sections of the society resulting in ethical challenges that need to be addressed and reconciled for the greater common benefit of the society.

Dr. D. Arivuoli, Professor, Department of Physics

Anna University Chennai



ANNA EDUSAT

CENTRE FOR FACULTY DEVELOPMENT
ANNA UNIVERSITY CHENNAI
PROGRAMME SCHEDULE FOR JULY – 2009

Date	Stream	Session I	Session II
		9.00 a.m. - 10.30 a.m.	11.00 a. m. - 12.30 p. m.
13.07.2009	B.E/B.Tech General	–	MA 2211 Transforms & Partial Differential Equations (III Sem) Dr.S.V.Subhashini
14.07.2009	B.E. Mechanical Engineering	ME 1303 Gas Dynamics & Jet Propulsion (V Sem) Mr.G.Kumaresan	ME 1302 Design of Machine Elements (V Sem) Dr.G.Thanigaiyarasu
15.07.2009	B.E. Electronics and Communication Engineering	EC 2203 Digital Electronics (III Sem) Dr.Y.V.Ramana Rao	EC 1305 Transmission Lines & Wave Guides (V Sem) Dr.K.Malathy
16.07.2009	B.E. Electrical and Electronics Engineering	EE 1401 Power System Operation & Control (VII Sem) Dr.R.P.Kumudini Devi	EE 1402 High Voltage Engineering (VII Sem) Ms.V.Gowri Sree
17.07.2009	B.E. Computer Science and Engineering	CS 2201 Data Structures (III Sem) Dr.T.V.Geetha	CS 1302 Computer Networks (V Sem) Dr.Ranjani Parthasarathi
20.07.2009	B.E/B.Tech General	–	MA 2211 Transforms & Partial Differential Equations (III Sem) Dr.S.V.Subhashini
21.07.2009	B.E. Mechanical Engineering	ME 1303 Gas Dynamics & Jet Propulsion (V Sem) Mr.G.Kumaresan	ME 1302 Design of Machine Elements (V Sem) Dr.G.Thanigaiyarasu
22.07.2009	B.E. Electronics and Communication Engineering	EC 2203 Digital Electronics (III Sem) Dr.R.Seshasayanan	EC 1305 Transmission Lines & Wave Guides (V Sem) Dr.K.Malathy
23.07.2009	B.E. Electrical and Electronics Engineering	EE 1401 Power System Operation & Control (VII Sem) Dr.R.P.Kumudini Devi	EE 1402 High Voltage Engineering (VII Sem) Ms.V.Gowri Sree
24.07.2009	B.E. Computer Science and Engineering	EE 1402 High Voltage Engineering (VII Sem) Dr.T.V.Geetha	CS 1302 Computer Networks (V Sem) Dr.Ranjani Parthasarathi
27.07.2009	B.E/B.Tech General	–	MA 2211 Transforms & Partial Differential Equations (III Sem) Dr.S.V.Subhashini
28.07.2009	B.E. Mechanical Engineering	ME 1303 Gas Dynamics & Jet Propulsion (V Sem) Mr.G.Kumaresan	ME 1302 Design of Machine Elements (V Sem) Dr.G.Thanigaiyarasu
29.07.2009	B.E. Electronics and Communication Engineering	EC 2203 Digital Electronics (III Sem) Dr.Y.V.Ramana Rao	EC 1305 Transmission Lines & Wave Guides (V Sem) Dr.K.Malathy
30.07.2009	B.E. Electrical and Electronics Engineering	EE 1401 Power System Operation & Control (VII Sem) Dr.R.P.Kumudini Devi	EE 1402 High Voltage Engineering (VII Sem) Ms.V.Gowri Sree
31.07.2009	B.E. Computer Science and Engineering	CS 2201 Data Structures (III Sem) Dr.T.V.Geetha	CS 1302 Computer Networks (V Sem) Dr.Ranjani Parthasarathi

ANNA EDUSAT

CENTRE FOR FACULTY DEVELOPMENT
ANNA UNIVERSITY CHENNAI
PROGRAMME SCHEDULE FOR AUGUST – 2009

Date	Stream	Session I	Session II
		9.00 a.m. - 10.30 a.m.	11.00 a. m. - 12.30 p. m.
03.08.2009	B.E/B.Tech General	–	MA 2211 Transforms & Partial Differential Equations (III Sem) Dr.S.V.Subhashini
04.08.2009	B.E. Mechanical Engineering	ME 1303 Gas Dynamics & Jet Propulsion (V Sem) Mr.G.Kumaresan	ME 1302 Design of Machine Elements (V Sem) Dr.G.Thanigaiyarasu
05.08.2009	B.E. Electronics and Communication Engineering	EC 2203 Digital Electronics (III Sem) Dr.R.Seshasayanan	EC 1305 Transmission Lines & Wave Guides (V Sem) Dr.K.Malathy
06.08.2009	B.E. Electrical and Electronics Engineering	EE 1401 Power System Operation & Control (VII Sem) Dr.R.P.Kumudini Devi	EE 1402 High Voltage Engineering (VII Sem) Ms.V.Gowri Sree
07.08.2009	B.E. Computer Science and Engineering	CS 2201 Data Structures (III Sem) Dr.T.V.Geetha	CS 1302 Computer Networks (V Sem) Dr.Ranjani Parthasarathi
10.08.2009	B.E/B.Tech General	–	MA 2211 Transforms & Partial Differential Equations (III Sem) Dr.S.V.Subhashini
11.08.2009	B.E. Mechanical Engineering	ME 1303 Gas Dynamics & Jet Propulsion (V Sem) Mr.G.Kumaresan	ME 1302 Design of Machine Elements (V Sem) Dr.G.Thanigaiyarasu
12.08.2009	B.E. Electronics and Communication Engineering	EC 2203 Digital Electronics (III Sem) Dr.Y.V.Ramana Rao	EC 1305 Transmission Lines & Wave Guides (V Sem) Dr.K.Malathy
14.08.2009	B.E. Computer Science and Engineering	CS 2201 Data Structures (III Sem) Dr.T.V.Geetha	CS 1302 Computer Networks (V Sem) Dr.Ranjani Parthasarathi
17.08.2009	B.E/B.Tech General	–	MA 2211 Transforms & Partial Differential Equations (III Sem) Dr.S.V.Subhashini
18.08.2009	B.E. Mechanical Engineering	ME 1303 Gas Dynamics & Jet Propulsion (V Sem) Mr.G.Kumaresan	ME 1302 Design of Machine Elements (V Sem) Dr.G.Thanigaiyarasu
19.08.2009	B.E. Electronics and Communication Engineering	EC 2203 Digital Electronics (III Sem) Dr.R.Seshasayanan	EC 1305 Transmission Lines & Wave Guides (V Sem) Dr.K.Malathy
20.08.2009	B.E. Electrical and Electronics Engineering	EE 1401 Power System Operation & Control (VII Sem) Dr.R.P.Kumudini Devi	EE 1402 High Voltage Engineering (VII Sem) Ms.V.Gowri Sree
21.08.2009	B.E. Computer Science and Engineering	CS 2201 Data Structures (III Sem) Dr.T.V.Geetha	CS 1302 Computer Networks (V Sem) Dr.Ranjani Parthasarathi
24.08.2009	B.E/B.Tech General	–	MA 2211 Transforms & Partial Differential Equations (III Sem) Dr.S.V.Subhashini
25.08.2009	B.E. Mechanical Engineering	ME 1303 Gas Dynamics & Jet Propulsion (V Sem) Mr.G.Kumaresan	ME 1302 Design of Machine Elements (V Sem) Dr.G.Thanigaiyarasu
26.08.2009	B.E. Electronics and Communication Engineering	EC 2203 Digital Electronics (III Sem) Dr.Y.V.Ramana Rao	EC 1305 Transmission Lines & Wave Guides (V Sem) Dr.K.Malathy
27.08.2009	B.E. Electrical and Electronics Engineering	EE 1401 Power System Operation & Control (VII Sem) Dr.R.P.Kumudini Devi	EE 1402 High Voltage Engineering (VII Sem) Ms.V.Gowri Sree
28.08.2009	B.E. Computer Science and Engineering	CS 2201 Data Structures (III Sem) Dr.T.V.Geetha	CS 1302 Computer Networks (V Sem) Dr.Ranjani Parthasarathi
31.08.2009	B.E/B.Tech General	–	MA 2211 Transforms & Partial Differential Equations (III Sem) Dr.S.V.Subhashini

ANNA EDUSAT

CENTRE FOR FACULTY DEVELOPMENT
ANNA UNIVERSITY CHENNAI
PROGRAMME SCHEDULE FOR SEPTEMBER – 2009

Date	Stream	Session I	Session II
		9.00 a.m. - 10.30 a.m.	11.00 a. m. - 12.30 p. m.
01.09.2009	B.E. Mechanical Engineering	ME 1303 Gas Dynamics & Jet Propulsion (V Sem) Mr.G.Kumaresan	ME 1302 Design of Machine Elements (V Sem) Dr.G.Thanigaiyarasu
02.09.2009	B.E. Electronics and Communication Engineering	EC 2203 Digital Electronics (III Sem) Dr.R.Seshasayanan	EC 1305 Transmission Lines & Wave Guides (V Sem) Dr.K.Malathy
03.09.2009	B.E. Electrical and Electronics Engineering	EE 1401 Power System Operation & Control (VII Sem) Dr.R.P.Kumudini Devi	EE 1402 High Voltage Engineering (VII Sem) Ms.V.Gowri Sree
04.09.2009	B.E. Computer Science and Engineering	CS 2201 Data Structures (III Sem) Dr.T.V.Geetha	CS 1302 Computer Networks (V Sem) Dr.Ranjani Parthasarathi
07.09.2009	B.E/B.Tech General	–	MA 2211 Transforms & Partial Differential Equations (III Sem) Dr.S.V.Subhashini
08.09.2009	B.E. Mechanical Engineering	ME 1303 Gas Dynamics & Jet Propulsion (V Sem) Mr.G.Kumaresan	ME 1302 Design of Machine Elements (V Sem) Dr.G.Thanigaiyarasu
09.09.2009	B.E. Electronics and Communication Engineering	EC 2203 Digital Electronics (III Sem) Dr.Y.V.Ramana Rao	EC 1305 Transmission Lines & Wave Guides (V Sem) Dr.K.Malathy
10.09.2009	B.E. Electrical and Electronics Engineering	EE 1401 Power System Operation & Control (VII Sem) Dr.R.P.Kumudini Devi	EE 1402 High Voltage Engineering (VII Sem) Ms.V.Gowri Sree
11.09.2009	B.E. Computer Science and Engineering	CS 2201 Data Structures (III Sem) Dr.T.V.Geetha	CS 1302 Computer Networks (V Sem) Dr.Ranjani Parthasarathi
14.09.2009	B.E/B.Tech General	GE 2111 Engineering Graphics (I Sem) Dr.N.S.Parthasarathy	MA 2211 Transforms & Partial Differential Equations (III Sem) Dr.S.V.Subhashini
15.09.2009	B.E. Mechanical Engineering	ME 1303 Gas Dynamics & Jet Propulsion (V Sem) Mr.G.Kumaresan	ME 1302 Design of Machine Elements (V Sem) Dr.G.Thanigaiyarasu
16.09.2009	B.E. Electronics and Communication Engineering	EC 2203 Digital Electronics (III Sem) Dr.R.Seshasayanan	EC 1305 Transmission Lines & Wave Guides (V Sem) Dr.K.Malathy
17.09.2009	B.E. Electrical and Electronics Engineering	EE 1401 Power System Operation & Control (VII Sem) Dr.R.P.Kumudini Devi	EE 1402 High Voltage Engineering (VII Sem) Ms.V.Gowri Sree
18.09.2009	B.E. Computer Science and Engineering	CS 2201 Data Structures (III Sem) Dr.T.V.Geetha	CS 1302 Computer Networks (V Sem) Dr.Ranjani Parthasarathi
22.09.2009	B.E. Mechanical Engineering	ME 1303 Gas Dynamics & Jet Propulsion (V Sem) Mr.G.Kumaresan	ME 1302 Design of Machine Elements (V Sem) Dr.G.Thanigaiyarasu
23.09.2009	B.E. Electronics and Communication Engineering	EC 2203 Digital Electronics (III Sem) Dr.Y.V.Ramana Rao	EC 1305 Transmission Lines & Wave Guides (V Sem) Dr.K.Malathy
24.09.2009	B.E. Electrical and Electronics Engineering	EE 1401 Power System Operation & Control (VII Sem) Dr.R.P.Kumudini Devi	EE 1402 High Voltage Engineering (VII Sem) Ms.V.Gowri Sree
25.09.2009	B.E. Computer Science and Engineering	CS 2201 Data Structures (III Sem) Dr.T.V.Geetha	CS 1302 Computer Networks (V Sem) Dr.Ranjani Parthasarathi
29.09.2009	B.E. Mechanical Engineering	ME 1303 Gas Dynamics & Jet Propulsion (V Sem) Mr.G.Kumaresan	ME 1302 Design of Machine Elements (V Sem) Dr.G.Thanigaiyarasu
30.09.2009	B.E. Electronics and Communication Engineering	EC 2203 Digital Electronics (III Sem) Dr.R.Seshasayanan	EC 1305 Transmission Lines & Wave Guides (V Sem) Dr.K.Malathy

ANNA EDUSAT
CENTRE FOR FACULTY DEVELOPMENT
ANNA UNIVERSITY CHENNAI
PROGRAMME SCHEDULE FOR JULY – 2009

Date	Stream	Session I
		9.00 a.m. - 10.30 a.m.
05.10.2009	B.E./B.Tech., General	GE 2111 Engineering Graphics (I Sem) Dr.N.S.Parthasarathy
12.10.2009	B.E./B.Tech., General	GE 2111 Engineering Graphics (I Sem) Dr.N.S.Parthasarathy
19.10.2009	B.E./B.Tech., General	GE 2111 Engineering Graphics (I Sem) Dr.N.S.Parthasarathy
26.10.2009	B.E./B.Tech., General	GE 2111 Engineering Graphics (I Sem) Dr.N.S.Parthasarathy
02.11.2009	B.E./B.Tech., General	GE 2111 Engineering Graphics (I Sem) Dr.N.S.Parthasarathy
09.11.2009	B.E./B.Tech., General	GE 2111 Engineering Graphics (I Sem) Dr.N.S.Parthasarathy
16.11.2009	B.E./B.Tech., General	GE 2111 Engineering Graphics (I Sem) Dr.N.S.Parthasarathy
23.11.2009	B.E./B.Tech., General	GE 2111 Engineering Graphics (I Sem) Dr.N.S.Parthasarathy
30.11.2009	B.E./B.Tech., General	GE 2111 Engineering Graphics (I Sem) Dr.N.S.Parthasarathy

ANNOUNCEMENT

CALL FOR PAPERS TO BE PRINTED IN NEWS BULLETIN INFOCUS SECTION
(for May issue)

Articles are invited from faculty members, on any one of the following topics. The content should not exceed 1200 words. The articles should reach the office of Anna University News Bulletin on or before 15th May 2009. The best article will be selected for publication by the Editorial Committee.

- Nanoscience and Technology
- Graph Theory
- Alkaline Fuel Cells
- Bio-polymers
- Interpersonal Communication Skills
- Soft Skills in Language Teaching

SOME HIGHEST WATERFALLS

Name	Location	Height in Metres
Angel	Venezuela	807
Tugela	Natal, South Africa	410
Kukenaam	Venezuela	610
Sutnerland	South Island, N.Z	589
Takkakaw	British Columbia	503
Ribbon (Yosemite)	California	491
Upper Yosemite	California	436
Gavarnie	South-West France	421
Vettifoss	Norway	366
Widows' Tears (Yosemite)	California	357
Stubbach	Switzerland	300
Middle Cascade (Yosemite)	California	227
King Edward VIII	Guyana	259
Gersoppa	India	253
Kaieteur	Guyana	251
Skykje	Norway	250
Kalambo	Tanzania-Zambia	426
Fairy (Mt.Rainier Park)	Washington	213
Trummelbach	Switzerland	213
Aniene (Teverpne)	Italy	207
Cascata delle Marmore	Italy	198
Maradalsfos	Norway	196
Feather	California	195
Maletsunyane	Lesotho	192
Bridalveli (Yosemite)	California	189
Multnomah	Oregon	189
Voringsfos	Norway	182
Nevada (Yosemite)	California	181
Skjeggedal	Norway	160
Marina	Guyana	152

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ANNA UNIVERSITY

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MAY 2009

News Bulletin

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> *"You can win more friends with your ears than with your mouth"*
>
> **- Harvey Mackay**

EDITORIAL COMMITTEE

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Anna University Chennai

FROM THE VICE - CHANCELLOR'S DESK

Teaching, research and extension are the triple functions of a university. Teaching is the dissemination of existing knowledge. Research is the creation of new knowledge and expansion of old knowledge. Extension is the process of taking the benefits of knowledge and skills to the community around and society at large. In the past three decades, Anna University Chennai has earned a reputation of excelling in all these three areas.

The launch of ANUSAT is the high point of Anna University Chennai in terms of high end research, drawing the attention of the whole world to the kind of high quality tangible and socially relevant research done here. It is not only Space Technology that has received attention from our research scholars and faculty, but also climate change and adaptation, nanotechnology, biotechnology, water resource management, energy engineering, nuclear physics, ocean management, medical electronics, medical physics, communication engineering, remote sensing, architecture and planning, etc. The list is endless. In fact, there is a wide variety of interdisciplinary research areas, including artificial intelligence and robotics. Our strong presence is everywhere in all kinds of research areas and so we have the rare distinction of being one of the top ten institutions with the largest number of research publications, both national and international.

Our country requires talented and creative scientists, engineers, technologists, managers, and other professionals. In consonance with our vision, we train and produce manpower to match the demands of society for undertaking research for knowledge creation and dissemination. We also put the knowledge to good use in our teaching and extension services. Our young students and young faculty members have the onerous task of carrying on with the tradition of good quality research and maintaining the momentum and scale.

We thank all our supporters, partners, and well-wishers, particularly the funding agencies, both government and private, who have generously helped us to achieve our present success in niche areas of science, engineering and technology. We look forward to fruitful co-operation in more adventurous research from every corner of the world.

(Dr.P. Mannar Jawahar)
Vice Chancellor

VICE-CHANCELLOR'S PROGRAMMES DURING APRIL 2009

Delegates from Wallonia Region, Belgium and Embassy of Belgium, India visited Anna University Chennai to establish bilateral academic and research co-operations on 21st April 2009.

Centre for Intellectual Property Rights and Centre for Technology Development and Transfer, Anna University Chennai jointly organized "World IP Day" on 24th April 2009.

AU-FRG INSTITUTE FOR CAD/CAM
Anna University Chennai
NATIONAL SEMINAR ON
"CREATIVITY & INNOVATION IN NEW PRODUCT DEVELOPMENT"
April 2009
Maudslay Hall
Department of Mechanical Engineering

Dr.P.Mannar Jawahar, Vice-Chancellor, Anna University Chennai inaugurated the National Seminar on "Creativity and Innovation in New Product Development" on 24th April 2009.

UNIVERSITY DEPARTMENTS / CENTRES

CONFERENCES / SEMINARS / SYMPOSIA / WORKSHOPS / FACULTY DEVELOPMENT AND TRAINING PROGRAMMES ORGANIZED

NATIONAL INSTITUTE FOR OCEAN MANAGEMENT

ESPA Project on Sustainable Governance in South Asian Fisheries 6th Indo-Dutch Course on "Coastal Zone Management: Coastal Tourism and Integrated Coastal Management Facility" from 6th to 13th April 2009, co-ordinated by **Ramesh.R**, Prof.Allister McGregor, Head, International Development Studies, University of Sussex, UK, gave the keynote address on Coastal Management.

AU-FRG INSTITUTE FOR CAD/CAM

Seminar on "Creativity and Innovation in New Project Development" on 24th & 25th April 2009, co-ordinated by **Parthasarathy.N.S**, Th.K.R. Anantha Kumaran Nair, Executive Director, Lucas-TVS, inaugurated the seminar and gave the keynote address on Creativity in New Product Development.

CENTRE FOR INTELLECTUAL PROPERTY RIGHTS

"World IP Day – 2009" on 24th April 2009, was jointly organized with Centre for Technology Development and Transfer, co-ordinated by **Shanmugam.T.N**.

DEPARTMENT OF ARCHITECTURE AND PLANNING

"Architech Conclave – 2 Architectural Forum" on 25th April 2009, co-ordinated by **Ranee Maria Leonie Vedamuthu**.

MEMORANDUM OF UNDERSTANDING

An MoU was signed between Anna University Chennai
and
Yonsei University, Seoul, Korea
on 21st April 2009
for collaboration in
Climate Change and Adaptation Research.

GOVERNMENT AND AFFILIATED COLLEGES

FACULTY

SPONSORED PROJECTS

Name of Coordinator	Title of the Project	Funding Agency	Amount Sanctioned (Rs. in lakhs)	Duration (years)
SRI VENKATESWARA COLLEGE OF ENGINEERING				
Ganesh Vaidyanathan.S	Tsunami early warning system	AICTE	4.02	3
Kishore Raja.P.C	Intrusion detection in wireless adhoc networks using adaptive algorithms	DRDO	6.70	3
Muthukrishnan.N	Experimental investigation and ANN modeling of Al-SiC (10p) metal matrix composites using PCD inserts	AICTE	3.50	3
VELAMMAL ENGINEERING COLLEGE				
Vidyavathy Balraj	Large scale preparation of phosphor for medicinal dosimetry LiF:Mg, Cu, P	BRNS	45.50	3

PAPER PRESENTATIONS

INTERNATIONAL CONFERENCES / SEMINARS / SYMPOSIA / WORKSHOPS

MEPCO SCHLENK ENGINEERING COLLEGE

Edward Rajan.S, "Electrical impedance tomography image of the lungs by type -I fuzzy black box back propagation intelligent technique", Conference on Intelligent Systems and Control, conducted by Karpagam College of Engineering, Coimbatore, on 6th & 7th February 2009.

Prabavathy.S, "Remote sensing sensors and its specifications", Conference on RAADIMS '09, conducted by Mepco Schlenk Engineering College, Sivakasi, on 20th & 21st February 2009.

K.S.R. COLLEGE OF ENGINEERING

Subramani.A and **Krishnan.A**, "Doubly finite queues (DF) supporting for ABR traffic load in ATM networks using MSVDR algorithm", Conference on Advanced Computing, conducted by Dhabar University, Punjab, on 6th & 7th March 2009.

VELAMMAL ENGINEERING COLLEGE

Kalivarathan.G, **Selvi.V** and **Umyal Muthu.V**, "An approximate sub grid modeling from the implicit large eddy simulation of compressible turbulence – ACFD Analysis", Conference on INCAMA '09, conducted by Kalasalingam University, on 26th March 2009.

NATIONAL CONFERENCES / SEMINARS / SYMPOSIA / WORKSHOPS

Dr. ADITANAR COLLEGE OF ENGINEERING

Gershom Jebaraj.P, "Solution growth of diglycine nitrate crystals and characterization", Conference on Crystalline Materials and Nanotechnology", conducted by Malankara Catholic College, Mariagiri, on 26th & 27th February 2009.

IFET COLLEGE OF ENGINEERING

Meenakshi.T, Chitra.A and Asha.J, "Renewable energy source fed multilevel DC link inverter with switches – A comparative study", Conference on ITPED '09, conducted by Velammal College of Engineering, Chennai, on 20th March 2009.

INFANT JESUS COLLEGE OF ENGINEERING

Allwin.S and **Rangaswamy.A**, "Information technology in college administration", Conference on IT Enabled Management, conducted by Anna University Tirunelveli, on 3rd April 2009.

K.S.R. COLLEGE OF ENGINEERING

Muralidharan.R and **Chandrasekar.C**, "Classification techniques in pattern recognition", Seminar on Bio-computing, conducted by Periyar University, Salem, on 7th March 2009.

Nithya Kalyani.S, "Ant colony optimization for oversaturated TSP", Conference on ECLITIC, conducted by Vivekanandha Engineering College for Women, Namakkal, on 9th March 2009.

Chinnusamy.K, "Performance analysis of OFCDM systems", Conference on Recent Trends in Communication and Signal Processing, conducted by Karunya University, Coimbatore, on 13th March 2009.

Sathish Kumar.T.M, "Internet pipelining in a throughput intensive FPGA architecture", Conference on Communication and Signal Processing, conducted by S.S.M. College of Engineering, Komarapalayam, on 21st March 2009.

Iyapparaja.M, "Overview of risk management", Conference on Computer Science Engineering and Information Technology, conducted by Paavai Engineering College, Namakkal, on 23rd March 2009.

Dhanasekaran.K, "Water making related data bases using secreting parameters", Conference on Computer Technology and Computer Application, conducted by Muthayammal Engineering College, Namakkal, on 27th March 2009.

VEL TECH ENGINEERING COLLEGE

Murugananthan.V, "A study on knowledge management platform optimization based data mining", Conference on Future Scenario of Knowledge Resource Technology in Digital Era, conducted by Sethu Institute of Technology, Virudhunagar, on 7th February 2009.

Srinivasan.G, "Wireless sensor network for early fire detection and automated mobile alert", Conference on Recent Trends in Information and Communication, conducted by Velammal Engineering College, Chennai, on 6th March 2009.

Murugananthan.V, "Exploring the opportunity of text mining to provide successful communal", Conference on Recent Trends in Web Technology, Conducted by B.S.Abdur Rahman University, Vandalur, on 25th March 2009.

VELLALAR COLLEGE OF ENGINEERING AND TECHNOLOGY

Karthikeyan.P, "An empirical evaluation of Indian retail industry with special reference to organized sector", Seminar on Profitability through Creativity and Innovation, conducted by Annamalai University, Chithambaram, on 10th March 2009.

Velumani.S, "Investigation on end-milling operations using genetic algorithm", Conference on innovative Ideas in Mechatronics, conducted by Kumaraguru College of Technology, Coimbatore, on 14th March 2009.

Maguteeswaran.R, "Integrated detailed job scheduling and manufacturing of control manufacturing resource planning", Conference on innovative Ideas in Mechatronics conducted by Kumaraguru College of Technology, Coimbatore, on 14th March 2009.

Ashadevi.B, "Materialized views selection in Dataware housing environment using cost effective approach", Conference on Soft Computing, Image Processing, Network and Data Management, conducted by Karpagam College of Engineering, Coimbatore, on 25th & 26th March 2009.

VELAMMAL ENGINEERING COLLEGE

Ganesan.R, **Ranjith Balakrishnan** and **Rajeshkannan R**, "MCommerce in pervasive environment", Conference on Computing Technologis Today and Beyond, conducted by Velammal Engineering College, Chennai, on 5th March 2009.

Sripriya.A, "Building dataware house using mobile database agents", Conference on Emerging Trends in Information and Communication Technology, conducted by Saveetha Engineering College, Chennai, 11th March 2009.

Dheepa.V, "A scheme of data privacy protection", Conference on Emerging Trends in Information and Communication Technology, conducted by Saveetha Engineering College, Chennai, 11th March 2009.

Arun Bhaskar.M and **Sunitha.D**, "Reduction of outage time in distribution networks using GIS and DLE", Conference on Planning, Operation and Control of Interconnected Power System, conducted by Annamalai University, Chidambaram, on 14th & 15th March 2009.

Arun Bhaskar.M, **Pradeep.R**, **Sivakumar.S**, **Varun Kumar.M** and **Balaji.K**, "Voltage quality improvement using DVR", Conference on Planning, Operation and Control of Interconnected Power System, conducted by Annamalai University, Chidambaram, on 14th & 15th March 2009.

Angala Parameswari.G and **Chidambaram.P**, "Transient stability studies in a power system with shunt compensator", Conference on Planning, Operation and Control of Interconnected Power System, conducted by Annamalai University, Chidambaram, on 14th & 15th March 2009.

Geetha.R, "Single phase to single phase matrix converter fed induction motor drive", Conference on ITPED'09, conducted by Velammal Engineering College, Chennai, on 20th March 2009.

Jagdeesh Kumar.M, "Static voltage stability enhancement using FACTS", Conference on ITPED'09, conducted by Velammal Engineering College, Chennai, on 20th March 2009.

VELAMMAL INSTITUTE OF TECHNOLOGY

Deepa.V, "Hierarchical routing algorithm for cluster mobile adhoc network", Conference on SNCETET '09, conducted by Rajarajeswari Engineering College, Chennai, on 3rd April 2009.

Mohana Priya.M, "Reduction of non-linear effects in MC-CDMA using Hadamard transform", Conference on SNCETET '09, conducted by Rajarajeswari Engineering College, Chennai, on 3rd April 2009.

Vimala.C, "Image de-noising through double density discreet wavelet transform", Conference on SNCETET '09, conducted by Rajarajeswari Engineering College, Chennai, on 3rd April 2009.

PAPER PUBLICATIONS IN JOURNALS

ADHIPARASAKTHI ENGINEERING COLLEGE

Logeswari.J (2008), "Synthesis and dielectric studies on pure and doped triglycine sulphate single crystals for laser applications", Journal of Optoelectronics and Advanced Materials, Vol.2, No.18, pp 630-634.

SRI VENKATESWARA COLLEGE OF ENGINEERING

Ramachandran.R (2008), "An improved algorithm for image compression using wavelets and contrast based quantization technique", Journal of Information Technology, Vol.7, No.1, pp 180-184.

Muthucumaraswamy.R, **Sathappan.KE** and **Natarajan.R** (2008), "Heat transfer effects on flow past an exponentially accelerated vertical plate with variable temperature", Journal of Theoretical Applied Mechanics, Vol.35, pp 323-331.

Muthucumaraswamy.R, **Sathappan.KE** and **Natarajan.R** (2008), "Mass transfer effects on exponentially accelerated isothermal vertical plate", Journal of Applied Mathematics and Mechanics, Vol.4, No.6, pp 19-25.

Loganathan.P, **Kulandaivel.T** and **Muthucumaraswamy.R** (2008), "First order chemical reaction on moving semi-infinite vertical plate in the presence of optically thin gray gas", Journal of Applied Mathematics and Mechanics, Vol.4, No.5, pp 26-41.

Srutha Keerthi.B (2008), "Some properties of hypergeometric functions for certain subclasses of starlike functions", Journal of Mathematics, Vol.50, No.3, pp 495-504.

Suchithra.K (2008), "On a subclass of k-uniformly convex functions associated with the convolution structure", Journal of Pure and Applied Mathematics, Vol.46, No.1, pp 95-110.

Pitchandi.K, "Entropy generation in pin fins of circular and elliptical cross section in forced convection with air", Journal of Thermodynamics, Vol.11, No.4, pp 161-171.

Pitchandi.K, "Entropy generation in periodic regenerative heat exchanger due to finite temperature difference", Journal of Thermodynamics, Vol.11, No.4, pp 173-179.

Muthukrishnan.N (2008), "An investigation on the machinability of Al-SiC metal matrix composites using PCD insert", Journal of Advanced Manufacturing Technology, Vol.38, No.5, pp 447-454.

Kavitha.T (2008), "Classification of metals and plastics from printed circuit boards (PCB) using air classifier", Journal of Chemical Engineering and Processing: Process Intensification, Vol.47, No.4, pp 565-576.

Saravanan.S (2008), "Combustion and emission characteristics of diesel engine fuelled with rice bran oil methyl ester and its diesel blends", Journal of Thermal Science, Vol.12, No.1, pp 139-150.

Saravanan.S (2008), "Role of biofuels in a sustainable environment – A technical study", Journal of Clean - Soil, Air, Water, Vol.36, No.10-11, pp 830-834.

Saravanan.S (2008), "High FFA crude rice bran oil – A renewable feedstock for sustainable energy and environment", Journal of Clean - Soil, Air, Water, Vol.36, No.10-11, pp 835-839.

Muthukrishnan.N (2008), "Machinability issued in turning of Al-SiC (10P) metal matrix composites", Journal of Advanced Manufacturing Technology, Vol.39, No.3, pp 211-218.

Sivanandham.M (2008), "Identification of structural stability of mutated hepatitis B virus capsid proteins by nano environmental energetics measurement", Journal of Functional Informatics and Personalized Medicine, Vol.1, No.3, pp 295-310.

Parthiban.R, **Iyer P.V.R** and **Sekaran.G** (2008), "Anaerobic tapered fluidized bed reactor for the treatment of sago industry effluent", Journal of Chemical Engineer, Vol.50, No.4, pp 323-333.

Srikantha Dath.T.N (2009), "A conceptual framework for supply chain management with specific reference to a developing economy", Journal of Logistics Systems and Management, Vol.5, No.5, pp 473-524.

Saravanan.S (2009), "Comparison of combustion characteristics of crude rice bran oil methyl ester with diesel as a CI engine fuel", Journal of Biobased Materials and Bioenergy, Vol.3, No.1, pp 32-36.

K.S.R. COLLEGE OF ENGINEERING

Geethaselvarani.A and **Maheshwaran.G** (2009), "Quality assessment of ground water in and around Noyyal River basin", Indian Association of Environmental Management, Vol.11, No.1, pp 107-112.

Ramesh.S and **Krishnan.A** (2009), "Modified genetic algorithm based load frequency controller for interconnected power systems", Journal of Electrical and Power Engineering, Vol.3, No.1, pp 26-30.

Sathiyasekar.K (2009), "Condition monitoring of stator winding insulation in high voltage rotating machines using BPN algorithm", Journal of Electrical and Power Engineering", Vol.3, No.2, pp 119-123.

CONFERENCES / SEMINARS / SYMPOSIA / WORKSHOPS / FACULTY DEVELOPMENT AND TRAINING PROGRAMMES ORGANIZED

INTERNATIONAL

VELAMMAL ENGINEERING COLLEGE

Conference on "Emerging Research and Advances in Mechanical Engineering" from 19th to 21st March 2009, co-ordinated by Chandra Sekar.T.

International Conference on
Emerging Research and Advances in Mechanical E
ERA -09
Organised by: DEPARTMENT OF MEC
VELAMM ENGIN RING CO

NATIONAL

ADHIPARASAKTHI ENGINEERING COLLEGE

ADHIPARASAKTHI ENGINEERING COLLEGE
ONE DAY WORKSHOP ON
EMERGING TRENDS IN WIRELESS EMBEDDED SYSTEMS
H.O.D
PRINCIPAL
CHIEF GUEST
CO-ORDINATOR

Workshop on "Emerging trends in wireless embedded systems" on 4th April 2009, co-ordinated by **Jayashri.S.**

Workshop on "Data Warehousing and Mining" on 4th April 2009, co-ordinated by **Poonguzhali.A.**

Conference on "Evolving challenges in renewable energy sources" on 16th April 2009, co-ordinated by **Anandavelu.K** and **Babu Ponnusami.A.**

ANAND INSTITUTE OF HIGHER TECHNOLOGY

Symposium on "AMETROSZ 2K9" on 20th March 2009, co-ordinated by **Ramya Ramprasad.**

Workshop on "Mobile Network" on 21st March 2009, co-ordinated by **Chandrasekaran.K.**

Workshop on "Data Warehousing and Data Mining" on 27th March 2009, co-ordinated by **Roselin Mary.S.**

Conference on "Recent Advances in e-Communication and i-Technologies" on 3rd & 4th April 2009, co-ordinated by **Rajachandrasekar.R.**

BHARATH NIKETAN ENGINEERING COLLEGE

Symposium on "Ethirayuga '09" on 15th February 2009, co-ordinated by **Arulkumar.P.V.**

Dr. SIVANTHI ADITANAR COLLEGE OF ENGINEERING

Workshop on "Image Processing through MATLAB" on 27th February 2009, co-ordinated by **Jeyakumar.S.**

Conference on "Smart Controllers" on 25th February 2009, co-ordinated by **Sivananaithaperumal.S.**

K.S.R. COLLEGE OF ENGINEERING

Symposium on "Asthra" on 6th March 2009, co-ordinated by **Balamurugan.K.**

MOOKAMBIGAI COLLEGE OF ENGINEERING

"Entrepreneurship Awarness Camp" on 17th March 2009, co-ordinated by **Palanisamy.A.**

Seminar on "Soft Computing Approaches for Image Processing Applications" on 6th February 2009, co-ordinated by Arivazhagan.S.

SOFT COMPUTING APPROACHES FOR
IMAGE PROCESSING APPLICATIONS
February 06 & 07, 2009
MEPCO SCHLENK ENGINEERING COLLEGE, SIVAKASI

Symposium on "VIBRANZ '09" on 12th February 2009, co-ordinated by **Selva Idhyanandhan.S.**

Symposium on "CRYPTIX '09" on 18th February 2009, co-ordinated by **Nagaraj.P.**

INSTITUTION OF ENGINEERS
(MECHANICAL ENGINEERING) STUDENTS' CHAPTER
MEPCO SCHLENK ENGINEERING COLLEGE
CRYPTIX 09

Conference on "Recent Advancement and Development in Material Science" on 20th & 21st February 2009, co-ordinated by **Marikani.A.**

RECENT ADVANCEMENT AND DEVELOPMENT IN
MATERIAL SCIENCE
DEPARTMENT OF PHYSICS
MEPCO SCHLENK ENGINEERING COLLEGE

Workshop on "INNOVATE '09" on 21st & 22nd February 2009, co-ordinated by **Shenbagaraj.R.**

Symposium on "ZEPHYRUS '09" on 25th February 2009, co-ordinated by **Bose.N.**

Workshop on "Distributed Computing" on 28th February 2009, co-ordinated by **Chandrasekaran.G.**

PANDIAN SARASWATHI YADAV ENGINEERING COLLEGE

Symposium on "BLAZE '09" on 19th March 2009, co-ordinated by **Kanirajan.P.**

Symposium on "MERIDE '09" on 21st March 2009, co-ordinated by **Jayaraman.S.**

Symposium on "U-CAN '09" on 23rd March 2009, co-ordinated by **Selvanathan.S.**

Symposium on "INFOZYNE '09" on 23rd March 2009, co-ordinated by **Nirai Chandran.U.**

Symposium on "TUGCSENS '09" on 26th March 2009, co-ordinated by **Jenitha.K.**

Symposium on "SMASHOZYNE '09" on 2nd April 2009, co-ordinated by **Manimegalai.A.**

VELLALAR COLLEGE OF ENGINEERING AND TECHNOLOGY

Conference on "Applications of Emerging Technology in Electrical Sciences" on 9th April 2009, co-ordinated by **Jabeen Begum.S.**

VELAMMAL ENGINEERING COLLEGE

Conference on "Computing Technologies – Today and Beyond" on 5th March 2009, co-ordinated by **Boominathan.P** and **Rathish Babu.T.K.S.**

Conference on "Innovative Techniques in Power Engineering and Drives" on 20th March 2009, co-ordinated by **Subramani.C** and **Arun Bhaskar.M.**

Conference on "VLSI And Image Processing" on 26th February 2009, co-ordinated by **Mahaboob Basha.**

Conference on "Computing Technologies Today And Beyond" on 5th March 2009, co-ordinated by **Shankar Ram.N.**

Symposium on "SIFAR '09" on 13th March 2009, co-ordinated by **Sattanathan.S.**

Conference on "Innovative Techniques in Power Engineering and Drives" on 20th March 2009, co-ordinated by Shiela Haran.

Conference on "Technology Enhanced Language Learning" on 27th March 2009, co-ordinated by Kalpana.V and Devi Kamala.B.

VELAMMAL ENGINEERING COLLEGE
One day National Conference
"TECHNOLOGY ENHANCED LANGUAGE LEARNING"

PAPER PRESENTATIONS

Dr. SIVANTHI ADITANAR COLLEGE OF ENGINEERING

Annie Jeba.J and Balasaranya Devi.K.M (B.E. Electrical and Electronics Engineering), "Power system economic dispatch using binary coded and real coded genetic algorithm – A comparison", National Seminar on INTESY '90, conducted by National Engineering College, Kovilpatti, on 12th February 2009 and won first prize.

Nageswari.R, Lenin Marksia.U, Shyline Mabel Gnanlilly.S and Smila.S (B.E. Electronics and Communication Engineering), "Regulatory violation and terrorism control monitoring system", National Conference on Embedded Systems, conducted by Kalasalingam University, Virudhunagar, on 19th & 20th February 2009 and won first prize.

Thangam.N and Dhanuja.M (B.E. Civil Engineering), "Steel in building construction", National Symposium on KON-STRUC, conducted by Sengunthar Engineering College, Tiruchengode, on 26th & 27th February 2009.

MEPCO SCHLENK ENGINEERING COLLEGE

Vigneshwari.M (B.E. Civil Engineering), "Green Concrete", Symposium on Tecuthsav '09, conducted by Thiyagarajar College of Engineering, Madurai, on 9th & 10th February 2009 and won first prize.

Sindhu.T and Suganya.R (B.Tech Information Technology), "Application of Bluetooth to improve road safety", Symposium on BLITZRIEG '09, conducted by Loyola Institute of Technology, Chennai, on 13th February 2009.

Hari Sudhan.D and Bala Sidaartha Gautam.G (B.E Electronics and Communication Engineering), "Applying discriminative ad HMMS in GPR for real time detection of landmines", Symposium on INTERFACE '09, conducted by Coimbatore Institute of Technology, Coimbatore, on 13th & 14th February 2009.

Karthick Narasimman.R.M and Dinesh Kumar.J (B.Tech Information Technology), "Advanced search engine concept through hyperlinked search", Conference on CRUSADER '09, conducted by S.K.P. Engineering College, Thiruvannamalai, on 20th February 2009.

VELLALAR COLLEGE OF ENGINEERING AND TECHNOLOGY

Mohana Priya.G (M.E. Computer Science and Engineering), "Job scheduling in a grid environment", Conference on Emerging Trends in Computer Science and Engineering, conducted by K.S.R. College of Technology, Tiruchengode, on 20th February 2009.

Vidhya.R (M.E. Computer Science and Engineering), "Carlo Median: An efficient k-means clustering algorithm for spatial database", Conference on Emerging Trends in Computer Science and Engineering, conducted by K.S.R. College of Technology, Tiruchengode, on 20th February 2009.

Nandhagopal.S.M (M.E. Computer Science and Engineering), "Wireless sensing of data using C5.0 decision tree algorithm", Conference on Emerging Trends in Computer Science and Engineering, conducted by K.S.R. College of Technology, Tiruchengode, on 20th February 2009.

Kayalvizhi.S (M.E. Computer Science and Engineering), "Optimizing incentives for computational grid using heuristics and P2P scheduling framework", Conference on Emerging Trends in Advanced Computing, conducted by Sasurie College of Engineering, Vijayamangalam, on 24th February 2009.

Vidhya.R (M.E. Computer Science and Engineering), "Improved k-means clustering algorithm for spatial database using Carlo Median", Conference on Emerging Trends in Advanced Computing, conducted by Sasurie College of Engineering, Vijayamangalam, on 24th February 2009.

Abuthakeer.M.H (M.E. Computer Science and Engineering), "Effective clustering accuracy by TGFS with CHIR using statistical data", Conference on Emerging Trends in Advanced Computing, conducted by Sasurie College of Engineering, Vijayamangalam, on 24th February 2009.

Nandhagopal.S.M (M.E. Computer Science and Engineering), "Remote sensing data mining using CART algorithm", Conference on Emerging Trends in Advanced Computing, conducted by Sasurie College of Engineering, Vijayamangalam, on 24th February 2009.

Sivakumar.J (M.E. Computer Science and Engineering), "Equipments for specially able persons", Seminar on Technologies for Rural Development, conducted by Anna University, Chennai, on 14th March 2009.

SPORTS

IFET COLLEGE OF ENGINEERING

Basketball team was placed first in Interzonal tournament, conducted by Anna University Chennai at Mailam Engineering College on 19th February 2009.

K.S.R. COLLEGE OF ENGINEERING

Joshua Alphin.S and Thangavelu.B (MCA) was placed third in Table Tennis in Zonal Meet, conducted at Government College of Engineering, Salem, on 21st March 2009.

MOOKAMBIGAI COLLEGE OF ENGINEERING

Mohamed Bilal (B.E. Mechanical Engineering) was placed first in Best Physique - 65kg in TIES 2009, conducted by Jayam College of Engineering and Technology, Dharmapuri, from 25th February to 11th March 2009.

MEPCO SCHLENK ENGINEERING COLLEGE

Women Ball Badminton team won the zonal tournament, conducted by Anna University Tirunelveli at Government College of Engineering, Tirunelveli on 12th February 2009.

Men Ball Badminton team won the zonal tournament, conducted by Anna University Tirunelveli at Government College of Engineering, Tirunelveli, on 13th February 2009.

Men Ball Badminton team won the zonal tournament, conducted by Anna University Tirunelveli at CSI College of Engineering, Nazareth, on 16th February 2009.

Women Ball Badminton team won the zonal tournament, conducted by Anna University Tirunelveli at Francis Xavier Engineering College, Tirunelveli, on 17th & 18th February 2009.

VELLALAR COLLEGE OF ENGINEERING AND TECHNOLOGY

Women Football team won Gold Medal in Tamil Nadu Inter Engineering Sports TIES 2009, conducted by Jayam College of Engineering, Dharmapuri, from 25th February to 11th March 2009.

Women Table Tennis team won the Gold Medal in the Zonal Tournaments, conducted by Anna University, Coimbatore, on 21st March 2009.

Kiruthika.G was placed second in the Athletic Meet 2008-2009, conducted by Anna University, Coimbatore, from 21st to 28th March 2009.

VELAMMAL ENGINEERING COLLEGE

Thiruppathi.K was placed second in Weight Lifting in Interzonal, conducted by Jayam College, Dharmapuri, on 3rd March 2009.

NSS

IFET COLLEGE OF ENGINEERING

Organized a programme on "Healthy Youth for Healthy India" at Pusaripalayam, Malrajankuppam and Pudur, from 3rd to 6th February 2009.

K.S.R. COLLEGE OF ENGINEERING

Organized a Special Camp at Thogoundam Palayam from 11th to 17th March 2009.

NANDHA ENGINEERING COLLEGE

Organized a one week camp at Kullampalayam village from 3rd to 9th March 2009.

Organized Eye camp jointly with Vasan Eye Care, Erode, on 19th March 2009.

FOREIGN VISITORS

MEPCO SCHLENK ENGINEERING COLLEGE

Mr. Jim Balsbaugh, President, Teezle, Project Developers for Information Engineering, USA visited the college on 18th February 2009 for having collaborative activities with the college for development of software relevant projects.

The Syndicate of Anna University Chennai in its 195th meeting on 15.04.2009 decided to award Ph.D. degree to the following research scholars

Name of the Research Scholar	Name of the Supervisor	Title of the Thesis
FACULTY OF CIVIL ENGINEERING		
Bhagavathi Perumal.S	Thamari.P	Groundwater quality assessment and regional flow modelling of Kanyakumari Colachel Coastal Aquifer, Tamil Nadu, India
Sekaran.V	Rajagopal.K	Comparison and modeling of zone settling data for cylindrical and varying cross sectional thickness for different types of suspended materials
Jayalakshmi.S	Kurian Joseph	Enhancement in biohydrogen and methane generation from kitchen waste by acetogenic bacteria during solid phase anaerobic digestion
Selvi Rajan.S	Jaya.K.P	Investigations into aerodynamics of bridges through wind tunnel testing
Palanisamy.T	Meenambal.T	Studies on strength and durability of high performance concrete with silica fume and ground granulated blast furnace slag as mineral admixtures
Sudha.V	Ambujam.N.K	Decision support model for optimal reservoir operation using association rule mining
FACULTY OF MECHANICAL ENGINEERING		
Azad.A	Narashiman.K	The effect of training in manufacturing industries
Venkataramanan.M	Sethumadhavan.R	Some studies on gasification of cashew shell char and dual fuelling of cashew shell char based producer gas in compression ignition engines
Sadagopan.P	Rudramoorthy.R	Investigations of wear and fatigue on roller chains of motorcycle
Sasikumar.G	Selladurai.V	Analysis on multi-criteria decision making for supplier selection
Karuppuswamy.P	Sundararaj.G	Investigations on failures of production machines through risk management and maintenance engineering for loss reduction
Vinodh.S	Sundararaj.G	Investigations on the development of total agile design system in traditional manufacturing environment
Ramalingam.V	Sivasubramanian.R	Optimization of process parameters in EDM and WEDM using Taguchi's design of experiment

Name of the Research Scholar	Name of the Supervisor	Title of the Thesis
FACULTY OF ELECTRICAL AND ELECTRONICS ENGINEERING		
Devi Shree.J Prabhakar.R	Anbalagan.P	Implementation of soft computing methods for improving the performance of photovoltaic system using maximum power point tracking algorithms
Manoharan.P.S	Kannan.P.S	Investigating the performance of evolutionary algorithms on power dispatch with optimality verification
Ezhilarasi.M	Rajaram.M	Design of sparse 2D arrays for real time 3D ultrasound imaging
Shumuga Latha.A	Baskar.S	Application of hybrid multi agent based particle swarm optimization to voltage stability analysis
Immanuel Selvakumar.A	Thanushkodi.K	New particle swarm optimization algorithms for non convex economic dispatch and short term hydrothermal scheduling problems
Joy Vasantha Rani.S.P	Kanagasabapathy.P	VLSI implementation of adaptive, fuzzy and neuro controllers
Sharmeela.C	Mohan.M.R	Power quality enhancement using custom power conditioners for distribution system
Senthil Kumar.V	Mohan.M.R	Artificial intelligence based algorithms for the optimal solution of security constrained thermal unit commitment and short-term hydrothermal scheduling problem
Premalatha.L	Vanaja Ranjan.P	Some investigations on nonlinear switching circuits exhibiting chaotic dynamics
FACULTY OF INFORMATION AND COMMUNICATION ENGINEERING		
Sujatha.C.M	Ramakrishnan.S	Prediction and classification of human respiratory functions using flow volume spirometry and radial basis function neural networks
Saraswathi.S	Ebenezer.D	Adaptive order statistic filters for removal of additive mixed noise and multiplicative speckle noise in images with blur reduction
Venkateswaran.N	Ramana Rao.Y.V	Discrete wavelet transform based hybrid image coding schemes for continuous tone images
Shunmuganathan.K.L	Vasudevan.V	A study of multiagent applications for networks
Sankara Gomathi.S	Bhagyaveni.M.A	Studies on energy conservation techniques for mobile ad hoc network
Sumathi.A	Wahida Banu.R.S.D	Digital filter design using evolvable hardware chip for image enhancement
Geetha.B.G Duraiswamy.K	Palanisamy.V	An innovative model for testing of inheritance related bugs in object oriented programs

Name of the Research Scholar	**Name of the Supervisor**	**Title of the Thesis**
Albert Raj.A	Suganthi.M	FPGA implementation of an efficient routing filter design
Velmurugan.A	Rajaram.R	A novel routing approach for hybrid manet and its performance analysis
Kalaiarasan.C	Selvan.S	A new approach for receiver driven layered multicast congestion control with improved round trip time estimation
Bommanna Raja.K	Madheswaran.M	Some investigations on classification of ultrasound kidney images for implementation of computer-aided diagnosis system
Murugavalli.S	Rajamani.V	Automatic brain tumor detection from magnetic resonance image using unsupervised segmentation techniques

FACULTY OF TECHNOLOGY

Kannappan.J	Ramachandralu.K	Design and development of air jet nozzle for rotor spinning
Thirumarimurugan.M	Kannadasan.T	Certain investigations on the performance analysis of heat exchangers for two phase systems using artificial neural networks
Chithra.K	Balasubramanian.N	Treatment of dye house effluent by electrochemical methods
Valavarasu.G	Balu.K	Pilot plant studies on industrial hydro cracking process and its integration with other refinery processes
Kantamneni Srinivasa Babu	Meenakshi Sundaram.S	Design and analysis of over expression of recombinant therapeutic protein human granulocyte macrophage colony stimulating factor (HGMCSF) and its purification
Aravindhan.R	Raghava Rao.J	Studies on the treatment of tannery wastewater using low cost natural adsorbents
Chandra Babu.N.K Reddy. BSR	Sadulla.S	Salt free preservation techniques and detailed studies on the rationalization of chilling process for hides and skins

FACULTY OF SCIENCE AND HUMANITIES

Poongothai.N	Murugavel.S.C	Study of essential oils as vapour phase inhibitors for corrosion of mild steel and copper
Boopathy.K	Rajendran.V	Study of structural and electrical properties of $Pb_{1-x}Sr_xZrO_3$ $(0 \leq x \leq 0.20)$ and $Ba_{1-x}Sr_xZrO_3$ $(0 \leq x \leq 0.20)$ ceramics synthesized by combustion technique

Name of the Research Scholar	Name of the Supervisor	Title of the Thesis
Nehru.E.S	Nelson.V.K	Vibration of piezolaminated cylinders
Muthukumar.A	Nadarajan.R	Efficient association rule mining algorithms on transactional databases
Subashini.S	Ramachandralu.K	Characteristics of spun silk fabrics produced from hollow yarns
Neetha.V	Ramesh.R	Dissolved carbon dioxide and methane in estuaries and waters surrounding mangroves on the east coast of India and the Andaman Islands
Shobana.M.K	Sankar.S	Synthesis of some ferrite nanomaterials by sol-gel combustion method and their characterization
Senthilkumaran.A	Moorthy Babu.S	Growth of pure and rare earth (Nd^{3+} and Yb^{3+}) doped double tungstates [$KGd(WO_4)_2$ and $KY(WO_4)_2$] and their characterization
Lynda Merlin.D	Sivasankar.B	Studies on polyurethane based hydrogels, IPNs and composites
Prasad Bala Murugan.G	Hema Achyuthan	Accumulation of heavy metals in edible marine organisms along the East Coast Chennai, Tamil Nadu
Subramanian.K	Meenakshi Sundaram.S	Molecular pathogenesis of enteropathogenic Escherichia coli (EPEC) – role of a surface marker in diagnosis and identification of a novel small molecule as a potential therapeutic agent
Meenakshi.N	Ramanan.S.V	An investigation of extra-clausal processing methods for extraction of information from the bio-medical literature
Dheva Shantha Kumari.G	Ganesan.S	Photodynamic activity of anthrax and napthoquinones from thespesia populnea and ervatamia coroneria plants and some synthetic coumarins
Valentine Rupa.A	Sivakumar.T	Noble metal (Ag, Au, Pt) deposited titania for the photocatalytic degradation of textile dyes
Uma Vanam	Kaliraj.P	Evaluation of immunoprophylactic efficacy of brugia malayi transglutaminase as single and multiple antigen vaccine with other target proteins for human lymphatic filariasis
Gopi.S	Ganesan.S	Study on the influence of different dosimetric parameters for improving the image guided radiation therapy
Subashini.D	Pandurangan.A	Synthesis and characterization of carbon nanotubes over modified MCM-41 through CVD technique

ENGLISH, COMMUNICATION SKILLS AND SOFT SKILLS

Introduction

English teachers of India have all along been entrusted with the task of teaching English language to the Indian students from primary to tertiary level for the purpose of internal as well as international communication. English has been perceived as a window to the world as also a link among the various states in the country. Gradually the focus of English language teaching shifted to the communication skills involved in using English for communication purposes. With the onset of globalization, the focus has again changed to the soft skills which include communication skills and English language. In this context, it is imperative to bring about changes in the English curriculum, particularly selection of materials, which go into the English text books. Only then the teachers will be able to perform their tasks in the classroom meaningfully. Otherwise, the English teachers may be considered as an anachronism in the era of soft skills. One such text that has wonderful potential to be exploited in the classroom for teaching English communication skills and soft skills is Ruskin Bond's short story "The Boy Who Broke the Bank". This paper discusses how this story can be used profitably in the classroom for the teacher, the students and the society at large.

Soft Skills

Essentially, soft skills are a set of personality traits, which are partly inherited and partly acquired, depending upon the individual's familial, social and educational environments. According to Dr Goeran Nieragden of Cologne, there are about twenty important soft skills. He lists them in a table under four different categories:

Interaction	**Self-Management**
Attitude awareness	Compensation strategies
Conflict handling	Decision making
Co-operation	Learning willingness
Diversity tolerance	Self-assessment
(N)etiquette	Self-discipline
Interlocutor orientation	Self-marketing
Teamwork willingness	Stress resistance

Communication	**Organization**
Delegating skills	Problem solving
Listening skills	Systems thinking
Presentation skills	Troubleshooting

He discusses these skills in his article "The Soft Skills of Business English", which obviously refers to 'work-related language coaching'. A similar list, though one skill less is given by Sabitha Rao in her interview to Chitra Deepa: To quote Ms. Rao: "A soft skill encompasses a cluster of personality traits. A person's ability to communicate, social grace, personal habits, friendliness, attitude, negotiating ability, leadership qualities, initiative, conflict management, innovation, creativity, lateral thinking, decision making, interpersonal skills, self-control or emotional maturity, time management, assertiveness, team spirit, capacity to work under pressure and stress – all these comprise soft skills". She also recommends Stephen R Covey's popular book **The 7 Habits of Highly Effective People** to understand all about soft skills.

Most of these ideas are strange to teachers who are fed by literatures of various countries and bits of ELT concepts, albeit imitations rather than originals in many cases. Because they are strange, we cannot ignore them. If we want to survive by our soft skills, and not by our hard skills, we need to pay attention to these new ideas and enable ourselves to rise up to the occasion. I believe that we can use our knowledge of literature, though not exactly classics or prescribed texts in our literature syllabuses, to train our students in these soft skills. I just happened to read Ruskin Bond's short story "The Boy Who Broke the Bank" long back, may be about a decade ago. Ever since my reading this story I have been telling my students to read it and benefit from it. Unfortunately this is not a most often prescribed text in our general English syllabus. I am not sure how it is taught at Gujarat University colleges, where it is on the syllabus. A look at the question paper indicated that this is dealt with more as a story than as a text with potential for teaching soft skills.

Ruskin Bond

Ruskin Bond is a well known author in India and abroad but not so popular among the teachers of English. He has written novels, novellas, essays, poems, and more than 500 short stories, all devoured by the general public. He has also been recognized by the Sahitya Academy with an award in 1993 and by the Government of India with a Padma Shri in 1999, besides recognition from other countries. When I had to include some stories in the M. A. English syllabus of Tripura University, I had difficult times in convincing the members of the Board of Studies in English that the stories of Bond are worth reading by the students of M. A. English, who generally become teachers of English. Finally ten stories, including "The Boy Who Broke the Bank" were approved. Thereafter both the students and the teacher had wonderful times with these stories. That is a different story. In the Southern Universities, Ruskin Bond has no place, as far as I know. It is high time we gave importance to well received popular writers like Bond and his company in General English and English Literature programmes.

"The Boy Who Broke the Bank"

Nathu is a sweeper boy of the Pipalnagar Bank, owned by Seth Govind Ram. He feels bad that the bank manager has not paid his wages for the month, though twenty days of the next month had passed by. Sitaram, the washer man boy, happens to listen to the grievances of Nathu and prepares to get the sweeper a new job. From here starts the distortion of message to reach the climax of the bank crash. Nathu, the boy, does not mean to break the bank but becomes an instrument for the collapse of the bank. The simple reason is the bank manager did not care to pay the wages due to Nathu on time.

Soft Skills from the Story

This is a delightful story to read and enjoy. But then it has wonderful potential to teach the soft skills to our students. In addition to looking at the language aspects of the story, we can draw the attention of the students to the flow of communication from the boy to the public, resulting in the bank crash. We can understand how a rumour is generated, though unwittingly. The supposed collapse is unwarranted but happens. Almost all the twenty soft skills can be located in the story. For focus, we may restrict ourselves to one of the most neglected skills – listening. Had the manager decided to give the salary to the sweeper on time, if not on the first of the month at least on the fifth or sixth, it would have been fine. But he did not do his job. At least he could have listened to the pleas of the boy, but the manager did not. As a result, a conflict arises between the worker and the intermediate worker. Ultimately it is the owner who is responsible for this mess. He ought to have visited the bank frequently to check whether things are going smoothly. But he did not. The public are worried about the money mainly because the owner is not in town and unfortunately he could not be contacted even over phone. There are many such gaps in communication. Consequently people fill in the gaps with their own imagination, leading to the collapse of the bank. The bank collapsed finally because communication collapsed mainly between the sweeper boy and the manager.

To teach this story interestingly in the class, it would be good for the teacher to have some idea about how communication flows in an organization or in society in general. For this the teacher can refer to some books on management communication. Any book on this subject will be of some use to the teacher of English. All these soft skills, after all, derive from the management or business context. A popular textbook that is available to teachers of English is **Developing Communication Skills** by Krishna Mohan and Meera Banerji from Macmillan and it can be used profitably for teaching communication skills to the students.

Conclusion

To sum up, soft skills have gained currency today in the market place. If our students have to perform well in their interviews and their work places, we teachers of English have to re-orient ourselves to learn and teach the soft skills to our students. It may be difficult for us to continue with our same old communicative syllabus, for communication which is only a portion of soft skills. In essence, we have to provide a holistic personality development education to our students. Of course, we can use our knowledge of literature and language, with new additions like Ruskin Bond and his short story "The Boy Who Broke the Bank". All that we have to do is to understand soft skills and help our students learn soft skills with the help of these stories, or any other material for that matter. The main matter today is soft skills.

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Gracefulness of Arbitrary Supersubdivisions of Graphs

1. INTRODUCTION

Let *G* be a graph with *m* edges. A *graceful* labelling of *G* is an injection from the set of its vertices to the set {0, 1, 2, 3..., *m*} such that the values of the edges are all integers from 1 to *m*, the value of an edge being the absolute value of the difference between the integers attributed to its end vertices.

Many mathematicians have constructed larger graceful graphs from standard graphs by using various operations. Join and product operations are used extensively among graphs such as paths, cycles, stars, complete graphs, complete bipartite graphs, complement of complete graphs and graceful trees etc., to get larger graceful graph 1, 2, 6, 9, 12 & 14. On the otherhand, when many copies of certain standard graphs such as complete graphs, complete bipartite graphs, cycles etc., are adjoined at one common vertex, the resultant graphs have been proved to be graceful 3-5, 13, 15 & 16. Similarly, when many copies of certain graphs, such as the complete graph K_4, edge deleted subgraphs of the complete graph K_4, cycles C_r with n - 3 consecutive chords etc., 8, 17 & 18, are adjoined at one common edge the resultant graphs have been proved to be graceful. For an exhaustive survey of these topics refer the excellent survey paper 11. Most recently, Burzio and Ferrarese have introduced an interesting method of construction of larger graceful trees from two given graceful trees by means of adjoining each vertex of one graceful tree with the other graceful tree. In this paper we introduce a new method of construction called supersubdivisions of a graph and show that arbitrary supersubdivisions of paths are graceful and that there exist a supersubdivision of cycles that are graceful. Finally, we discuss related open problems.

In the complete bipartite graph K_{2,m_i} we call the part consisting of two vertices *the 2-vertices part* $K_{2,m_i}$of and the part consisting of *m* vertices *the m-vertices part of* K_{2,m_i}. Let G be a graph with *n*

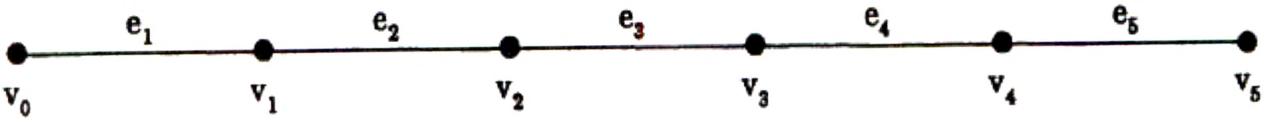

Fig. 1(a). Path P_6

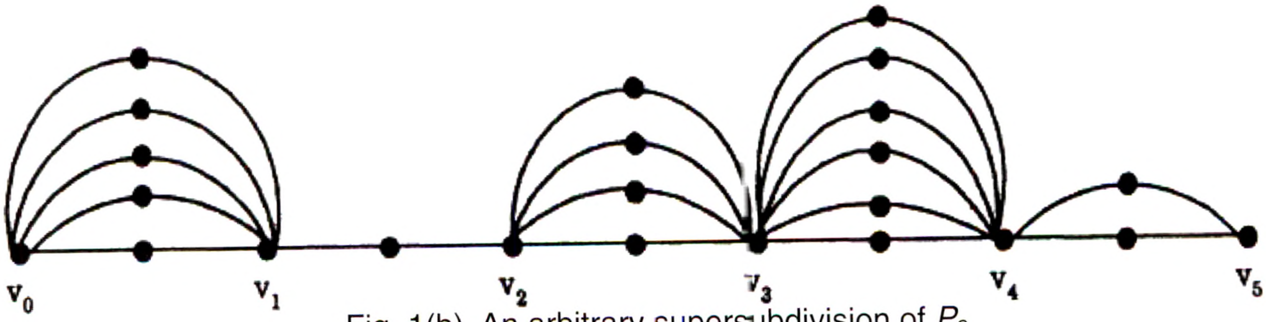

Fig. 1(b). An arbitrary supersubdivision of P_6

vertices and *t* edges. A graph *H* is said to be a *supersubdivision* of *G* if *H* is obtained from *G* by replacing every edge 3*i* of *G* by a complete bipartile graph K_{2,m_i} for some *mi'* $1 \le i \le t$ in such a way that the ends of *ei* from *G*. A supersubdivision *H* of a graph *G* is said to be an *arbitrary supersubdivision* of a graph of *G* if every edge of *G* is replaced by an arbitrary K_{2,m_i} (*m* may vary for each edge arbitrarily).

2. ARBITARY SUPERSUBDIVISIONS OF PATHS ARE GRACEFUL

In this section we prove that arbitrary supersubdivisions of paths are graceful and then we show that there exist a supersubdivision of any cycle Cn that is graceful.

Theorem 1 *— Arbitary supersubdivisions of any path are graceful.*

Proof : Let P_n for $1 \le i \le n - 1$. Let *H* be an arbitrary supersubdivision of a path P_n' That is, for $1 \le i \le n - 1$, each edge of *Pn* is replaced by a complete bipartite graph K_{2,m_i} where *mi* is any positive integer. Observe that *H* has

$M = 2\,(m_1 + m_2 + ... + m_{n-1})$ edges.

Let $N_0 = M$ and let $N_{i-1} = M - 2\,(m_1 + m_2 + ... + m_{n-1}) + (i-1)$, for $2 \le i \le n - 1$. Now for each *i*, $1 \le i \le n - 1$, in the increasing order, (starting with 1) we shall give a graceful labelling to the vertices of K_{2,m_i} of a supersubdivision graph *H* of P_n corresponding to the edge e_i of P_n as shown in Fig 2.

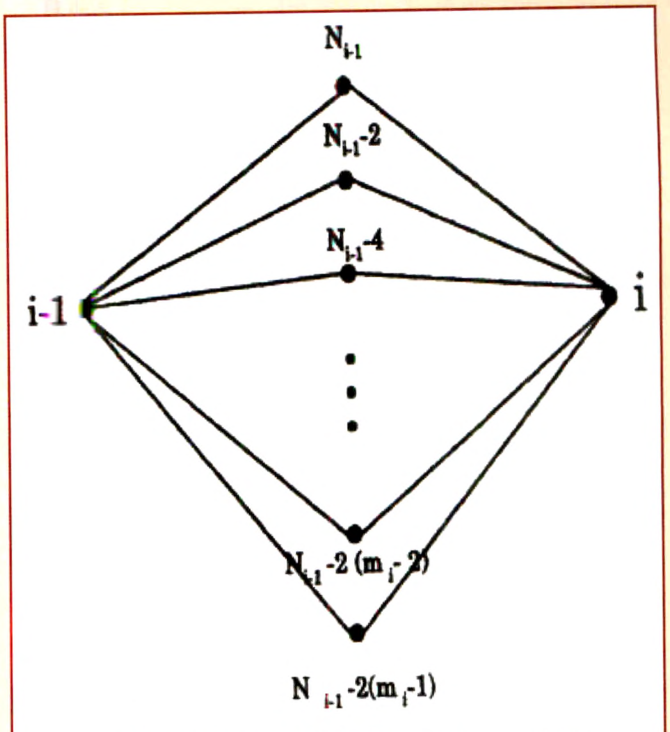

Fig. 2. Graceful labelling of K_{2,m_i} of *H*

Note that the two vertices of the 2-vertices part of K_{2,m_i} get the labels *i – 1* and i and the label *Ni-1, Ni-1 -4, ..., Ni-1 -2 (mi + 1)* are assigned to the mi vertices of mi-vertices part of *K2,mi'*. It is clear from the above labelling that the mi + 2 vertices of K_{2,m_i} have distance labels and the 2_{mi} edges of K_{2,m_i} also have district labels. Therefore, the vertices of each K_{2,m_i}, $1 \le i \le n - 1$, in the supersubdivision *H* of P_n have distinct labels and hence the edges of each K_{2,m_i}, $1 \le i \le n - 1$, in the supersubdivision graph *H* of *Pn* also have been distinct lables Hence *H* is graceful.

Illustrative examples for the labelling of Theorem 1.

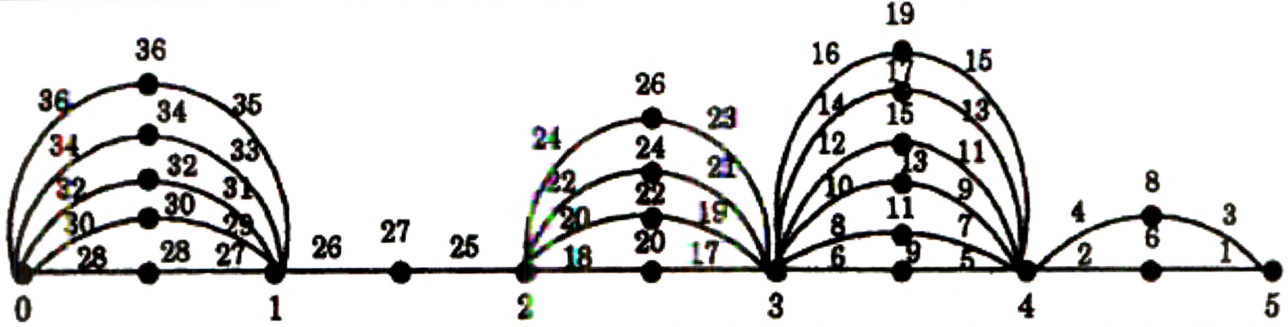

Fig. 3(a). Graceful of the subersupdivision labelling of the supersubdivision of P6 that is shown in Fig. I

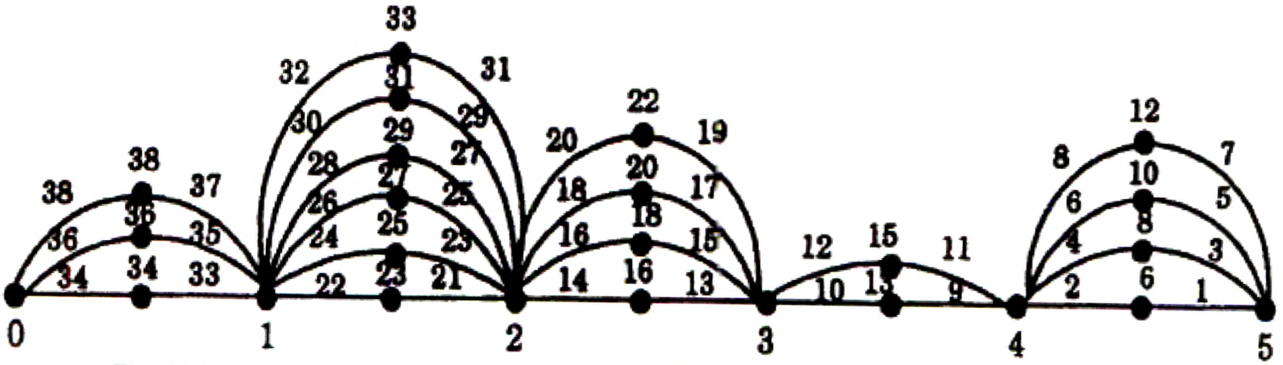

Fig. 3(b). Graceful labelling of a supersubdivision of a P6 different from that is shown in Fig. 1

Observe that in the first example, the edge 34 of P_6 is replaced by $K_{2,6}$ in the construction of the supersubdivision, while in the second example, the edge 34 of P_6 is replaced by $K_{2,2}$ for the construction of the supersubdivision.

2.1 A Graceful Supersubdivision of Cycles

In this section we prove that there exist a supersubdivision of Cn which is graceful.

Theorem 2 — *From any $n \leq 3$, there exists a supersubdivision of Cn that is graceful.*

Proof : Let C_n be a cycle with consecutive vertices $n_0 n_1, \ldots, n_{n-1}$. Let G be a supersubdivision of cycle C_n obtained by replacing each edge e_i of Cn by a complete bipartite graph K_{2,m_i} where $m_i \varepsilon Z^+$, for $1 \leq i \leq n - 1$ and $m_n = (n-1)$. It is clear that G has $M = 2\ (m_1 + m_2 + \ldots + m_{n-1})$ edges.

Let $Ni{-}1 = M - 2\ (m_1 + m_2 + \ldots + m_{i-1}) + i - 1$. When $i = 1$, $N_{i-1} = N_0 = M$. Now, for each i, $1 \leq i \leq n - 1$, the vertices of K_{2,m_i}, of G (obtained by replacing the corresponding edge ei of C_n' $1 \leq i \leq n - 1$) are labelled as shown in Fig. 2

For the vertices K_{2,m_n} of G (obtained by replacing the corresponding edge en of Cn) give lables as shown in Fig. 4.

It follows that the vertices K_{2,m_i} for $1 \leq i \leq n - 1$, have distinct labels and hence the edges of K_{2,m_i} for $1 \leq i \leq n - 1$, also have distinct labels.

Therefore, all the vertices and all the edges of G have distinct labels.

Hence, G is graceful.

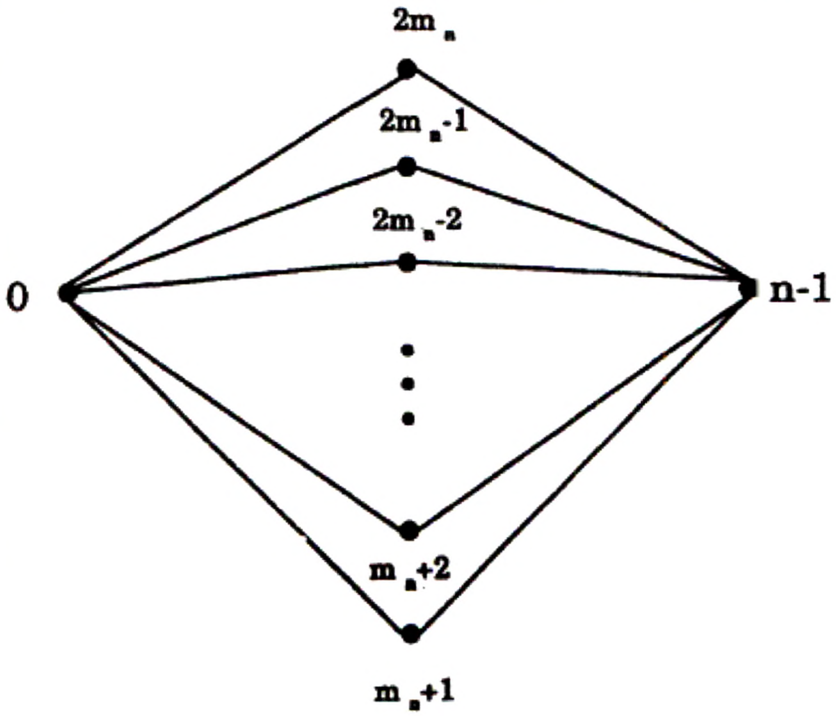

Fig. 4. Graceful labelling of in G.

Illustration of labelling of Theorem 2

Note that the edge $v_0\ v_4$ is replaced by $K_{2,4}$ for the construction of supersubdivision of *C*5.

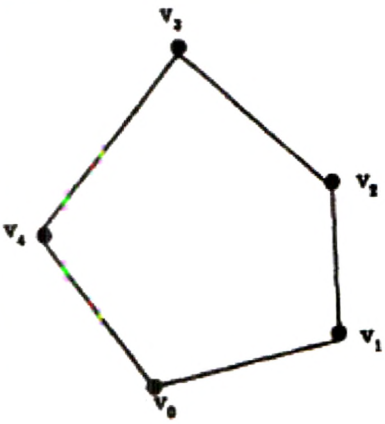

Fig. 5(a), Cycle C_5

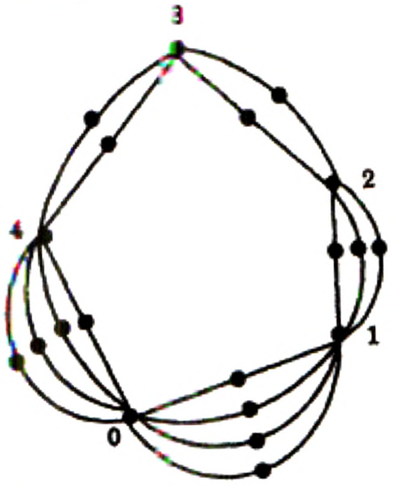

Fig. 5(b), Supersubdivision of C_5

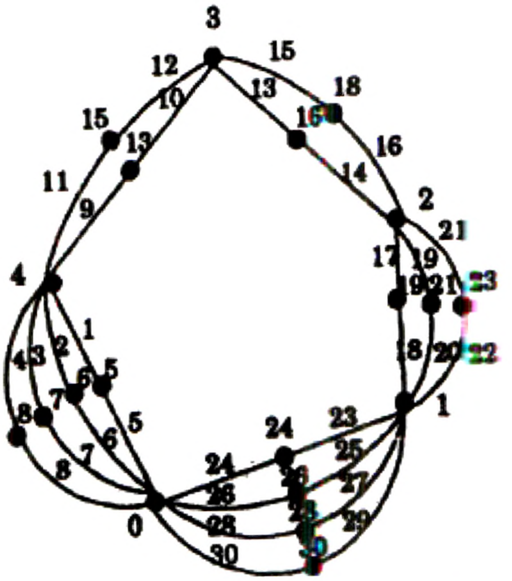

Fig. 5(c), Graceful labelled graph of SS (C_5)

Remark

"Supersubdivision of a graph" can be used as a powerful operation to get larger graphs from a given graph. In obtaining arbitrary supersubdivision of a given graph *G*, each edge of *G* can be replaced by for any value of *m*, independently. Thus, each edge of *G* gives raise to an infinite family of supersubdivision of *G*.

3. Discussion

In this paper, we have shown that arbitrary supersubdivsions of paths are graceful and for every cycle Cn' *n* ≤ 3, there exist supersubdivisions which are graceful but only paths have graceful arbitrary supersubdivisions. So, we conclude this paper with the following two open problems :

Problem 1 Are there any graphs different from paths whose arbitrary supersubdivisions are graceful.

Problem 2 Is it true that every connected graph has at least one supersubdivisions which is graceful?

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(Printed in Indian Journal of Pure & Applied Mathematics)

Research Centres of Excellence

CENTRE FOR BIOTECHNOLOGY

The Centre for Biotechnology, Anna University, Chennai is celebrating its silver jubilee year in 2009. Established 25 years ago with financial support from Department of Biotechnology, Government of India and the University Grants Commission, it has been a pioneer in imparting educational and research training facilities in areas of Biotechnology. Recently, in 2005, two new self-supporting courses, Food Technology and Pharmaceutical Technology, have been started.

The department has been awarded an amount of Rs 7,53,93,000/- towards Enhancing the Research Capacity and initiating Integrated M.Tech. & Ph.D. programme in the area of Food Technology in 2008. The second phase of UGC-DRS (2008-2013) with a grant of Rs. 46 lakhs for further research work in Diagnosis and preventive vaccines and therapy for infectious diseases and DST-FIST (2008-2013) for infrastructure development have been granted. The Centre also enjoyed infrastructure and research support from Technical Education Quality Improvement Programme (TEQIP).

Apart from these in 2008-2009 a number of research grants have been secured by the faculty for their proposed projects from various funding agencies of Government of India. The highlight of the department's achievement is the rare distinction of a single department being recognized for two areas of excellence and being funded to the tune of 6 crores by DBT for programme-mode support under Centre of Excellence. The other achievements are:

- As coordinator of the UGC-DRS programme on infectious diseases research and DBT's Centre of Excellence programme for development of vaccines for infectious diseases with filariasis as a model and diagnostic platform, Prof. P. Kaliraj successfully commercialized the rapid diagnostic kit for filariasis and provided critical post-marketing support. The kit is now marketed in Africa also. Efficacious vaccine for filariasis, an elusive objective, is becoming a reality with novel approaches using peptides and protein engineering. Three dimensional characterization of some of the promising targets is holding promise to develop novel therapeutic drug for this neglected infectious disease. The diagnostic platform for infectious diseases under development. Project grants from ICMR, UGC, CSIR and DRDO support the activities of his group.
- An Indo-Norwegian project on Immunology of human filarial and shrimp viral infections has been awarded to Dr. R. B. Narayanan to the tune of 58.07 lakhs (2008-2012)
- Prof. P. Gautam has been working in the area of bioorganic chemistry and computational biology to cleverly design macromolecular features useful in various biological applications including nanotechnology. He has also filed 3 patents from his work. A programme support under Centre of Excellence scheme of DBT amounting to Rs.144.4 Lakhs has been awarded to Dr.P.Gautam for work on "Macromolecular Engineering & Design" (2008-2013).
- Prof. K.Sankaran has been made the Director of Centre with Potential for Excellence in Environmental Science for which the next phase funding by UGC is expected shortly. He is the Dy. Coordinator of the Centre of Excellence project and DRS-phase II programme on infectious diseases. He has successfully initiated instrumentation for infectious diseases programme with the support of DST and developed a simple rapid test kit for the early diagnosis of Shigella and Enteroinvasive E.coli. He is a co-investigator in the development of diagnostic test for enteropathogenic Escherichia coli (EPEC) for which he has a grant from Wellcome Trust , UK till 2011
- Dr.V.Murugan was awarded the prestigious Tamilnadu Scientist award, Government of Tamilnadu for 2008 in the area of Life sciences/Technology. He was also granted a joint Indo-Norwegian project on vaccine development for marine animal infections, for 58.07 Lakhs (2008-2013). He is an investigator in the Centre of Excellence programme on infectious diseases diagnostics and vaccine.
- Dr.Meenakshisundaram, Assistant professor has been awarded Department of Biotechnology, Govt of India project on "Recombinant production of CALB enzyme in Pichia pastoris and its immobilization for an amount of Rs 22.15 Lakhs for 3 years (2008-2011) . He runs the project on UGC sponsored project on "Construction of a single-chain Fv antibody fragment specific for Wuchereria bancrofti protein Wb-SXP1 and its expression in E.coli "(2009-2012) for an amount of Rs 10.098 Lakhs. He is an investigator in the Centre of Excellence programme on infectious diseases diagnostics and vaccine.
- Dr.B.S.Lakshmi has been awarded an amount of Rs 14.8 Lakhs from CSIR, Govt of India for working on the project titled "Investigation of the Lead molecules isolated from Medicinal

plants for anti-Microbial and Anti-inflammatory activity against Enteric Pathogens and its Endotoxins (2008-2011).She also works on National Medicinal Plant Board, AYUSH, GOI sponsored project on "Bio activity based screening of medicinal plants for inflammation associated cancer – invitro and invivo studies" (Rs 17.5 Lakhs, 2008-2011).

- Dr.S.Ramalingam has been awarded UGC sponsored project on "Increasing yield of Reuterin (3-Hydroxy Propionaldehyde) in metabolically engineered Lactobacillus reuterin for 7.648 Lakhs (2008-2011) and DST sponsored project on Metabolic Engineering for 12.98 Lakhs (2009-2012).

The following equipments have been purchased in the past one year for an amount exceeding Rupees One lakh (2008-2009)

Sl.No	Name of the instrument/ Equipment	Purchase cost Rs.
1.	Modulus Microplate Fluorometer	4,78,622.00
2.	HPLC System	25,88,238.00
3.	Inverted Fluorescence Microscope	57,85,090.00
4	High Speed Refrigerated Centrifuge	9,38,582.00
5.	Super High Speed Table Top Refrigerated Centrifuge	3,91,204.00
6.	Freeze Dryer	14,98,554.00
7.	Membrane Filtration System	6,44,800.00
8.	pH STAT Titrator	4,10,865.00
9.	Desktop Computer	1,57,800.00
10.	Bench Top Fermentor	2,00,000.00
11.	Column Chromatography	14,52,009.00
12.	Chemiluminescences Fluorescence Microplate Reader	11,15,988.00
13.	Super High speed Table Top Refrigerated Centrifuge	4,22,004.00
14.	Animex HPLC Column Minicycler & Gel Doc	5,66,839.00
15.	Biosafety Hood	1,43,653.00
16.	Electronic Orbital Laboratory shaker	1,50,501.00
17.	Eppendrof Refrigerated Table Top Centrifuge	6,01,510.00
18.	Bio Fermentor	14,25,710.00
19.	Reagent Spotter, Line Dispenser	30,17,365.00
20.	Ultra Centrifuge	30,72,298.00

Seminars conducted:

- An Indo-UK seminar on "Perspectives in Biotechnology" was conducted during September 2009 wherein more than 600 students participated.
- Biotechnology workshop on Molecular Dynamics simulation was conducted in December 2008 for College Faculty members.

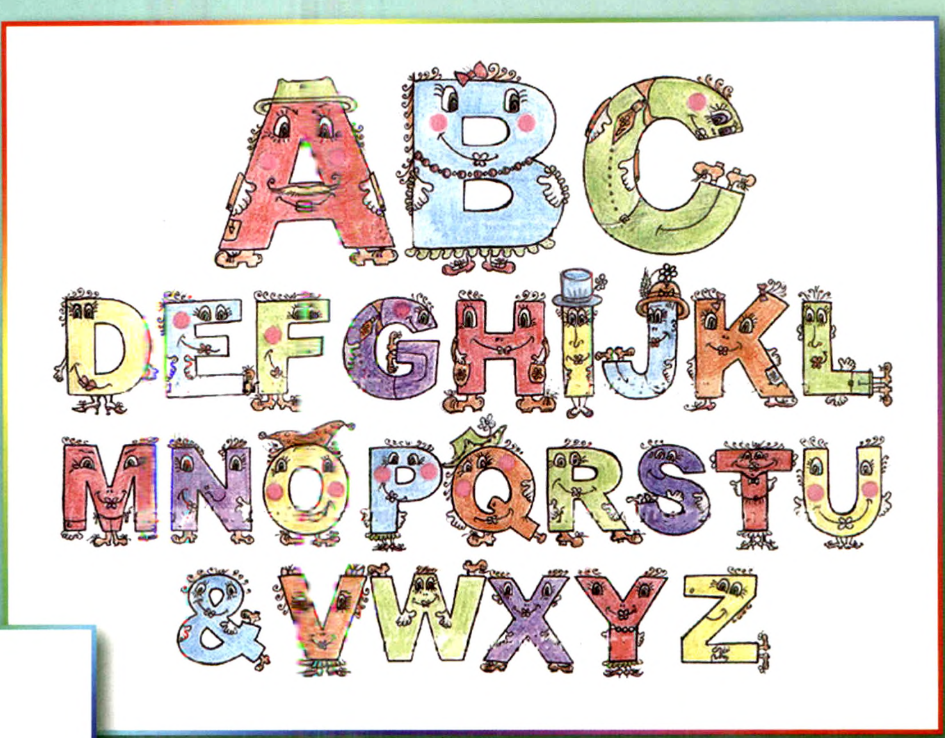
Alphabet of happiness

A—Accept

Accept others for who they are and for the choices they've made even if you have difficulty understanding their beliefs, motives, or actions.

B—Break Away

Break away from everything that stands in the way of what you hope to accomplish with your life.



C—Create

Create a family of friends whom you can share your hopes, dreams, sorrows, and happiness with.

D—Decide

Decide that you'll be successful and happy come what may, and good things will find you. The roadblocks are only minor obstacles along the way.

E—Explore

Explore and experiment. The world has much to offer, and you have much to give. And every time you try something new, you'll learn more about yourself.

F—Forgive

Forgive and forget. Grudges only weigh you down and inspire unhappiness and grief. Soar above it, and remember that everyone makes mistakes.

G—Grow

Leave the childhood monsters behind. They can no longer hurt you or stand in your way.

H—Hope

Hope for the best and never forget that anything is possible as long as you remain dedicated to the task.

I—Ignore

Ignore the negative voice inside your head. Focus instead on your goals and remember your accomplishments. Your past success is only a small inkling of what the future holds.

J—Journey

Journey to new worlds, new possibilities, by remaining open-minded. Try to learn something new every day, and you'll grow.

K—Know

Know that no matter how bad things seem, they'll always get better. The warmth of spring always follows the harshest winter.

L—Love

Let love fill your heart instead of hate. When hate is in your heart, there's room for nothing else, but when love is in your heart, there's room for endless happiness.

M—Manage

Manage your time and your expenses wisely, and you'll suffer less stress and worry. Then you'll be able to focus on the important things in life.

N—Notice

Never ignore the poor, infirm, helpless, weak, or suffering. Offer your assistance when possible, and always your kindness and understanding.

O—Open

Open your eyes and take in all the beauty around you. Even during the worst of times, there's still much to be thankful for.

P—Play

Never forget to have fun along the way. Success means nothing without happiness.

Q—Question

Ask many questions, because you're here to learn.

R—Relax

Refuse to let worry and stress rule your life, and remember that things always have a way of working out in the end.

S—Share

Share your talent, skills, knowledge, and time with others. Everything that you invest in others will return to you many times over.

T—Try

Even when your dreams seem impossible to reach, try anyway. You'll be amazed by what you can accomplish.

U—Use

Use your gifts to your best ability. Talent that's wasted has no value. Talent that's used will bring unexpected rewards.

V—Value

Value the friends and family members who've supported and encouraged you, and be there for them as well.

W—Work

Work hard every day to be the best person you can be, but never feel guilty if you fall short of your goals. Every sunrise offers a second chance.

X—X-Ray

Look deep inside the hearts of those around you and you'll see the goodness and beauty within.

Y—Yield

Yield to commitment. If you stay on track and remain dedicated, you'll find success at the end of the road.

Z—Zoom

Zoom to a happy place when bad memories or sorrow rears its ugly head. Let nothing interfere with your goals. Instead, focus on your abilities, your dreams, and a brighter tomorrow.

ANNOUNCEMENT

CALL FOR PAPERS TO BE PRINTED IN NEWS BULLETIN INFOCUS SECTION (for June/July issue)

Articles are invited from faculty members, on any one of the following topics. The content should not exceed 1200 words. The best article will be selected for publication by the Editorial Committee.

- Information and Communication Technology for Urban Development Management
- e-governance and urban Municipal Government
- Architectural Styles of Chennai
- Urban & architectural Conservation

Disclaimer
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by the respective Institution/Department
The Publication Division will not be held responsible.

ANNA UNIVERSITY

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VOLUME 4 - ISSUE 2

JUNE 2009

News Bulletin

Anna Birth Centenary Year Celebration
Indo-German Workshop on
STRATEGIC PLANNING FOR WATER SUPPLY AND WASTEWATER MANAGEMENT
Centre for Environmental Studies
Anna University Chennai
gtz
Date: 28th & 29th April, 2009

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> *Always bear in mind that your own resolution to succeed is more important than any other one thing.*
>
> **- Abraham Lincoln**

EDITORIAL COMMITTEE

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Photos : Ramanujan Computing Centre
Anna University Chennai

FROM THE VICE - CHANCELLOR'S DESK

The Twenty first century is proclaimed by many as the "Knowledge era". In this competitive era, it is absolutely necessary for everyone to be equipped with knowledge. For all students who have come into Anna University Chennai, irrespective of whether they are in the Undergraduate of Postgraduate programmes, the primary objective in the ensuing semesters should be to work hard and equip themselves with necessary knowledge and skills to succeed in the stiff competition in the employment arena.

Opportunities for students to develop their knowledge and all round personality are available plenty at Anna University Chennai. The University provides students with a curriculum that is dynamic and development-oriented. Apart from the curriculum, students are also encouraged to participate in co-curricular and extra-curricular activities to enhance their personality. In addition, the University periodically organizes seminars, workshops, conferences and technical symposia to enable students to exhibit their hidden talents and help them to develop their individual potential. These aspects of education compliment the acquisition of knowledge from the curriculum.

In the words of our former President, Dr.A.P.J. Abdul Kalam, institutions should impart an education that "can sow the seeds of capacity-building among the students". It is the prime duty of any educational institution to inculcate the capacities such as research and enquiry, creativity, innovation and entrepreneurial and moral leadership in students. The kind of educational programme given to students at Anna University Chennai can ensure that the seeds of capacity building are sown as soon as the students enter the portals of the University, germinate, and come to fruition by the time they leave the University.

Let me earnestly hope that all students who enter this university would get the best out of this curriculum that has been designed to help them in their career and in their life. I would also like to give a special word of advice to final year students. They should aim to excel in their projects and should hone their skills to interact with representatives from industry so that they gain a competitive edge in their careers. My hearty wishes to the students who are preparing to appear in examinations like Test of English as a Foreign Language (TOEFL), Graduate Aptitude Test in Engineering (GATE), JEEE and civil services. I wish all students success in all their endeavors.

(Dr.P. Mannar Jawahar)
Vice Chancellor

VICE-CHANCELLOR'S PROGRAMMES DURING APRIL – MAY 2009

Anna Birth Centenary Year Celebration
Indo-German Workshop on
STRATEGIC PLANNING FOR WATER SUPPLY AND WASTEWATER MANAGEMENT
gtz
Venue: Muthian Auditorium,CES

Vice-Chancellor, Anna University
Chennai inaugurated
Indo-German Workshop on
"Strategic Planning for Water Supply
and Waste Water Management"
on 28th April 2009

Vice-Chancellor, Anna University
Chennai discussed
bilateral research and academic
co-operation with
the delegates from Belgium
on 29th April 2009

Vice-Chancellor, Anna University
Chennai with the faculty and
students of University of Nebraska
Lincoln, USA,
on 22nd May 2009.

UNIVERSITY DEPARTMENTS / CENTRES

FACULTY

PAPER PUBLICATIONS IN JOURNALS

DEPARTMENT OF MATHEMATICS

Baskar Babujee.J and **Babitha.S** (2009), "L(2,1) labeling for some class of planar graphs", Journal of Pure and Applied Mathematics, Vol.5, No.1, pp 77-87.

Baskar Babujee.J and **Prathap.D** (2009), "Magic and bimagic labeling for star graphs", Journal of Pure and Applied Mathematics, Vol.5, No.1, pp 67-76.

ORGANIZED

NATIONAL CONFERENCES / SEMINARS / SYMPOSIA / WORKSHOPS / FACULTY DEVELOPMENT AND TRAINING PROGRAMMES

DEPARTMENT OF CIVIL ENGINEERING

Seminar on "Performance of Disaster Resistant Structures", on 7th & 8th May 2009, co-ordinated by **Devadas Manoharan.P**.

CENTRE FOR ENVIRONMENTAL STUDIES AND CENTRE FOR CLIMATIC CHANGE AND ADAPTATION RESEARCH

"World Environmental Day 2009 – Your Planet Needs You – Unite to Combat Climate Change", on 5th June 2009, co-ordinated by **Navaneetha Gopalakrishnan.A** and **Ramachandran.A**.

AU-FRG INSTITUTE FOR CAD/CAM

Seminar on "Creativity and Innovation in New Product Development" on 24th & 25th April 2009, co-ordinated by **Parthasarathy.N.S**.

INSTITUTE OF REMOTE SENSING

Training Programme on "Remote Sensing and GIS Applications for Environmental Monitoring and Photogrammetry Applications", on 18th May 2009, co-ordinated by **Vidhya.R**.

FORTHCOMING EVENTS

DEPARTMENT OF INDUSTRIAL ENGINEERING

International Conference on "**Advances in Industrial Engineering Applications (ICAIEA 2010)**" from 6th to 8th January 2010.

Contact Details : **Dr.M.Rajmohan**
Secretary
ICAIEA 2010
Department of Industrial Engineering,
Anna University Chennai, Chennai 600 025
Ph : +91-9444436272 / +91-9840582844
Email : paulrobert@icaiea2010.com
rajmohan@icaiea2010.com
Website : www.icaiea2010.com

DEPARTMENT OF ENGLISH

National Seminar on "**Teaching of General and Technical English**" on 5th & 6th February 2010.

Contact Details : **Dr. S. P. Dhanavel**
Convener
Professor and Head
Department of English
Anna University Chennai, Chennai 600 025
Ph : 044 2235 8727
Email : gete2010@gmail.com
Website : http://www.annauniv.edu/pdf/English_Seminar.pdf

GOVERNMENT AND AFFILIATED COLLEGES

FACULTY

SPONSORED PROJECTS

Name of Coordinator	Title of the Project	Funding Agency	Amount Sanctioned (Rs. in lakhs)	Duration (years)
MEPCO SCHLENK ENGINEERING COLLEGE				
Kannan Balasubramanian	Architectures and algorithms for input queued switches	AICTE	4.60	3

PAPER PRESENTATIONS

INTERNATIONAL CONFERENCES / SEMINARS / SYMPOSIA / WORKSHOPS

IFET COLLEGE OF ENGINEERING

Meenakshi.T, Chitra.A and **Asha.J**, "A rule based fuzzy logic controller for cascaded multilevel inverter in utility applications", International Conference on Electrical Energy System & Power Electronics (ICEESPEEE'09), conducted by SRM University, Kattankulathur, on 17th April 2009.

K.S.RANGASAMY COLLEGE OF TECHNOLOGY

Geetha.B.G, Singaravel.G and **Kamal Raj.R**, "Reducing effort on software project management using software package reusability", IEEE International Advanced Computing Conference (IAACC '09), conducted by Thapar University, Patiala, on 6th March 2009.

Ramesh.N, "Commercialization of solid waste management", Seminar on Managing Global Recession, conducted by K.S. Rangasamy College of Technology, Tiruchengode, on 25th March 2009.

Jegatheeswaran.D, "Cost effectiveness of papercrete bricks", Seminar on Managing Global Recession, conducted by K.S. Rangasamy College of Technology, Tiruchengode, on 25th March 2009.

Muniraj.C, "Computation of electric field and potential distribution around a polluted composite insulator by Finite Element Method", Conference on Electrical Energy Systems and Power Electronics in Emerging Economics, conducted by SRM University, Kattankulathur, on 16th & 17th April 2009.

Vijayagowri.G, "Voltage sage compensator using PWM inverter", Conference on Electrical Energy Systems and Power Electronics in Emerging Economics, conducted by SRM University, Kattankulathur, on 16th & 17th April 2009.

Sanavullah.M.Y and **Kanagaraj.N**, "Fuzzy based online tuning of PI controller for pressure regulation", Conference on Electrical Energy Systems and Power Electronics in Emerging Economics, conducted by SRM University, Kattankulathur, on 16th & 17th April 2009.

Thangavel.S and **Kulandaivel.V**, "Wind velocity and rotor position sensorless control for permanent magnet synchronous generator of wind generation system", Conference on Electrical Energy Systems and Power Electronics in Emerging Economics, conducted by SRM University, Kattankulathur, on 16th & 17th April 2009.

MEPCO SCHLENK ENGINEERING COLLEGE

Selvathi.D, "Effective fuzzy clustering algorithm for abnormal MR brain image segmentation", International Advance Computing Conference (IACC 2009), conducted by Thapar University, IEEE Delhi Section and IEEE Computer Society Chapter, (IEEE Delhi Section), on 6th & 7th March 2009.

Selvathi.D, "Neural computing based abnormality detection in retinal optical images", International Advance Computing Conference (IACC 2009), conducted by Thapar University, IEEE Delhi Section and IEEE Computer Society Chapter, (IEEE Delhi Section), on 6th & 7th March 2009.

Arivazhagan.S, "Color texture image classification using wavelet texture spectral features", Conference on Biomedical Informatics and Signal Processing, conducted by SSN College of Engineering, Chennai, on 13th & 14th March 2009.

Arivazhagan.S, "Rotation and scale invariant texture classification using gabor transform", Conference on Biomedical Informatics and Signal Processing, conducted by SSN College of Engineering, Chennai, on 13th & 14th March 2009.

Shantha Selvakimari.R, "Wavelet based ECG signal compression using burrows wheeler coder", Conference on Biomedical Informatics and Signal Processing, conducted by SSN College of Engineering, Chennai, on 13th & 14th March 2009.

Vasuki.S, "Effective segmentation algorithm for bio medical images using co-occurrence and law's energy mask features", Conference on Biomedical Informatics and Signal Processing, conducted by SSN College of Engineering, Chennai, on 13th & 14th March 2009.

Anand.S, "Spot edge detection in CDWA micro array images using balanced multiwavelet", Conference on Biomedical Informatics and Signal Processing, conducted by SSN College of Engineering, Chennai, on 13th & 14th March 2009.

Davidson Kamaladhas.M, "A new sampling theorem for non stationary band limited chirp signals using fractional Fourier transform", Conference on Biomedical Informatics and Signal Processing, conducted by SSN College of Engineering, Chennai, on 13th & 14th March 2009.

Edward Rajan.S, "An improved family of new ZVS-PWM active clamping DC to DC buck converter", Conference on Electrical Energy Systems and Power Electronics in Emerging Economies, conducted by SRM University, Chennai, on 16th & 17th April 2009.

Edward Rajan.S, "Design and analysis of ZVS cuk converter employing active clamp topology", Conference on Electrical Energy Systems and Power Electronics in Emerging Economies, conducted by SRM University, Chennai, on 16th & 17th April 2009.

Sabapathi.T, "Capacity optimization in optical communication using DWDM system", Conference on VLSI and Communication, conducted by Saintgits College of Engineering, Kottayam, from 16th to 18th April 2009.

Indumathi.G, "Cross layer priority scheduling algorithm in wireless networks", Conference on VLSI and Communication, conducted by Saintgits College of Engineering, Kottayam, from 16th to 18th April 2009.

Vasuki.S, "A novel multi channel segmentation algorithm for color texture images, Conference on VLSI and Communication, conducted by Saintgits College of Engineering, Kottayam, from 16th to 18th April 2009.

SONA COLLEGE OF TECHNOLOGY

Mohanraj.V, **Senthil Kumar.J**, **Suresh.Y**, "Capturing intuition of online users using a web usage mining", International Advance Computing Conference (IACC 2009), conducted by Thapar University, IEEE Delhi Section and IEEE Computer Society Chapter, (IEEE Delhi Section), on 6th & 7th March 2009.

V.L.B. JANAKIAMMAL COLLEGE OF ENGINEERING AND TECHNOLOGY

Suresh Prabhu, "Recycling of solid in foundry", Conference on Emerging Research and Advances in Mechanical Engineering, conducted by Velammal Engineering College, Chennai, from 19th to 21st March 2009.

VELAMMAL ENGINEERING COLLEGE

Revathi Pandian, "FDI and Retailing in India", Conference on Transaction Business, conducted by Dr.MGR University, Chennai, on 4th April 2009.

NATIONAL CONFERENCES / SEMINARS / SYMPOSIA / WORKSHOPS

K.S.RANGASAMY COLLEGE OF TECHNOLOGY

Prasanth.K, "The IT era of the vehicular industry", Conference on Recent Trends in Networking and Communication", conducted by RVS College of Arts and Science, Coimbatore, on 4th March 2009.

Gopalakrishnan.S, "Disaster forecasting using bore hole data", Seminar on Disaster Mitigation and Rehabilitation of Structures, conducted by Annamalai University, Chidambaram, on 19th & 20th March 2009.

Jegatheswaran.D, "Papercrete bricks with addition of flyash", Seminar on Modern Trends in Civil Engineering, conducted by Dr. Sivanthi Aditanar College of Engineering, Tiruchendur, on 20th March 2009.

Mahendran.S, "Implementation of fuzzy logic controller for the speed control of chopper fed DC motor", Conference on Innovations in Electrical, Electronics and Control Systems, conducted by Kumaraguru college of Technology, Coimbatore, on 20th & 21st March 2009.

Kulandaivel.V, "Wind velocity and rotor position sensorless control for permanent magnet synchronous generator", Conference on Innovations in Electrical, Electronics and Control Systems, conducted by Kumaraguru college of Technology, Coimbatore, on 20th & 21st March 2009.

Prasanth.K, "Research challenges for VANET", Conference on ACENET '09, conducted by PSNA Engineering College, Dindigul, on 21st March 2009.

Gopalakrishnan.S, "GIS approach for earthquake disaster modeling", Seminar on Advances and Innovations in Civil Engineering, conducted by Mepco Schlenk Engineering College, Sivakasi, on 25th March 2009.

Jegatheswaran.D, "Papercrete – An alternative construction material", Seminar on Advances and Innovations in Civil Engineering, conducted by Mepco Schlenk Engineering College, Sivakasi, on 25th March 2009.

K.S.R. COLLEGE OF ENGINEERING

Sathish Kumar.T.M, 'Synthesis of single bit control system processor", Conference on Advanced Communication and Computing, conducted by Paavai College of Engineering, Namakkal, on 2nd April 2009.

Sathish Kumar.R, "Performance analysis of threshold based group adaptive subcarrier allocation in OFDEM systems", Conference on Advanced Communication and Computing, conducted by Paavai College of Engineering, Namakkal, on 2nd April 2009.

V.L.B. JANAKIAMMAL COLLEGE OF ENGINEERING AND TECHNOLOGY

Chandragupta Mauryan.K.S and **Sivarajan.S**, "Heart beat signal compression using wavelet", Conference on Current Trends in Converging Technologies (CTCT'09), conducted by Coimbatore Institute of Engineering and Information Technology, Coimbatore, on 13th March 2009.

Ravikumar.K, "A study on cutting forces while grinding Al/SiC_p composites", Conference on Innovative Ideas in Mechatronics, conducted by Kumaraguru College of Technology, Coimbatore, on 14th March 2009.

Chandragupta Mauryan.K.S and **Sivarajan.S**, "Wavelet based lossy compression", Conference on Innovative Ideas in Mechatronics, conducted by Kumaraguru College of Technology, Coimbatore, on 14th March 2009.

Chandragupta Mauryan.K.S, "Effective optimal control of hybrid power compensator", Conference on Innovative Ideas in Mechatronics, conducted by Kumaraguru College of Technology, Coimbatore, on 14th March 2009.

Sivarajan.S, "Non-volatile analog memory cell", Conference on Innovative Ideas in Mechatronics, conducted by Kumaraguru College of Technology, Coimbatore, on 14th March 2009.

VEL TECH MULTI TECH Dr. RANGARAJAN Dr. SAKUNTHALA ENGINEERING COLLEGE

Prabhu.S.V, "A low power fully pipelines JPEG LS encoder for lossless image compression", Conference on Innovative Techniques in Power Engineering and Drives, conducted by Velammal Engineering College, Chennai, on 20th & 21st March 2009.

VELAMMAL ENGINEERING COLLEGE

Deivendran.P, "Security management framework", Symposium on NICTM '09, conducted by PSNA College of Engineering, Dindigul, on 3rd April 2009.

Sylvia.D, "The performance of OFDM-MIMO system using singular value decomposition in WLAN environment", Conference on Digital Convergence '09, conducted by RMK Engineering College, Gummidipoondi, on 5th April 2009.

Sripriya.A, "Authentication for wireless network security using mobile agent", Conference on Recent Trends in Computer Applications, conducted by Vellalar College of Engineering and Technology, Erode, on 9th April 2009.

Dheepa.V, "Distributed privacy – preserving approaches in data linking", Conference on Recent Trends in Computer Applications, conducted by Vellalar College of Engineering and Technology, Erode, on 9th April 2009.

Chamundeeswari.R.M, "Integration of cellular and adhoc networks based on hybrid encryption", Conference on Recent Trends in Computer Applications, conducted by Vellalar College of Engineering and Technology, Erode, on 9th April 2009.

Kavitha.B, "Security threads for mobile agents in mobile computing", Conference on Recent Trends in Computer Applications, conducted by Vellalar College of Engineering and Technology, Erode, on 9th April 2009.

Rajamani.K and **Nirmal Raj.A**, "E-tailing in India", Conference on New Media Marketing, conducted by Aalim Muhammed Salegh College of Engineering, Chennai, on 25th April 2009.

PAPER PUBLICATIONS IN JOURNALS

K.S.RANGASAMY COLLEGE OF TECHNOLOGY

Srinivasan.PSS and **Murugesan.A** (2008), "Effect of engine performance and emission characterization of PSZ coated engine with ethanol and bio-diesel blend as fuel" Journal of Engineering, Science and Technology, Vol.II, No.2, pp 34-38.

Sasikala.R (2009), "Performance analysis and design decisions for dynamic proxy based multicast technique", Journal of Engineering Research and Industrial Application, Vol.2, No.2, pp 145-160.

Ramesh.N (2009), "Quantification, characterization and leachate analysis of the municipal solid waste from Erode Municipality, Tamil Nadu", Journal of Nature Environment and Pollution Technology, Vol.8, No.1, pp 21-28.

K.S.R. COLLEGE OF ENGINEERING

Senthil Kumar.P and **Sundram.S** (2009), "Study of flank wear monitoring in single point cutting tool using AET", Journal of Curie, Vol.2, No.1, pp 57-65.

MEPCO SCHLENK ENGINEERING COLLEGE

Selvathi.D (2009), "Curvelet based rician noise removal in magnetic resonance images of brain", Journal of Computational Intelligence and Healthcare Informatics, Vol.2, No.1, pp 29-34.

Arivazhagan.S (2009), "Iris recognition using multi-resolution tranforms", Journal of Biometrics, Vol.1, No.3, pp 254-267.

Arivazhagan.S (2009), "Texture characterization using WSFS and WCFS", Journal of Image and Graphics, Vol.9, No.1, pp 77-100.

VEL TECH MULTI TECH Dr. RANGARAJAN Dr. SAKUNTHALA ENGINEERING COLLEGE

Dhanapal.R (2009), "An intelligent system for visualization of intelligence of learners", Journal of Recent Trends in Engineering, Vol.1, No.1, pp 1-5.

Rajan.K (2009), "Modern solid state switches and their applications in energy efficient high frequency power systems", Journal of Engineering Research and Industrial Applications, Vol.2, No.111, pp 85-95.

Chellaram.C (2009), "Anti-inflammatory potential of coral reef associated gastropod, Drupa Margariticola", Journal of Science and Technology, Vol.2, No.2, pp 75-77.

Chellaram.C (2009), "Anti-nociceptive assets of coral reef associated gastropod, Drupa Margariticola", Journal of Pharmacology, Vol.5, No.2, pp 189-192.

INTERNATIONAL CONFERENCES / SEMINARS / SYMPOSIA / WORKSHOPS / FACULTY DEVELOPMENT AND TRAINING PROGRAMMES

K.S.RANGASAMY COLLEGE OF TECHNOLOGY

Seminar on "Managing Global Recession: Opportunities and Challenges", on 25th March 2009, co-ordinated by **Rajarajeswari. S**, **Hemamalini. R** and **Vijayakumar. M.**

NATIONAL CONFERENCES / SEMINARS / SYMPOSIA / WORKSHOPS / FACULTY DEVELOPMENT AND TRAINING PROGRAMMES

IFET COLLEGE OF ENGINEERING

Conference on "Techcon'09" on 18th April 2009, co-ordinated by **Matilda.S**, **Mariappane.E**, **Nirmala.S**, **Asha.J** and **Prakash.C.**

Faculty Development Programme on "Core Competency Development" on 2nd and 3rd May 2009, co-ordinated by **Annie Sweetlin.J.P.**

Workshop on "Mission 10X" on 11th & 12th May 2009, co-ordinated by **Annie Sweetlin.J.P.**

K.S.RANGASAMY COLLEGE OF TECHNOLOGY

Seminar on "Smart Materials in Industrial Automation", on 24th & 25th March 2009, co-ordinated by **Sakthivel.G** and **Anoj Kumar.L.**

Conference on "Emerging Trends in Communication and Information Technology", on 1st & 2nd April 2009, co-ordinated by **Prakash.G** and **Saravanan.S.**

MEPCO SCHLENK ENGINEERING COLLEGE

Symposium on "ABHIVART '09", on 12th March 2009, co-ordinated by **Mala.K.**

Conference on "Convergence of IT Research", on 13th March 2009, co-ordinated by **Revathy.T.**

Seminar on "Research Issues in Digital Image Processing", on 21st March 2009, co-ordinated by **Chandrasekaran.G.**

Conference on "Advances and Innovations in Civil Engineering (AICE '09)", on 25th March 2009, co-ordinated by **Prabavathy.S.**

National Conference on
Fuzzy Mathematics, Graph Theory and Applications
NCFMGT '09
April 17 & 18, 2009
Organised by
Department of Mathematics
Mepco Schlenk Engineering College, Sivakasi

Conference on "Fuzzy Mathematics, Graph Theory and Applications", on 17th & 18th April 2009, co-ordinated by **Rajendran.B.**

Mount Zion
College of Engineering and Technology
Communication & Employability Training
Victory
Sponsored by
MOUNT ZION

MOUNT ZION COLLEGE OF ENGINEERING AND TECHNOLOGY

Training Programme on "Communication and Employability Training", on 3rd & 4th March 2009, co-ordinated by **Nixon.A** and **Suresh.G.**

SONA COLLEGE OF TECHNOLOGY

Seminar on "Applications of Network Security", on 11th April 2009, co-ordinated by Prakash.G.

V.L.B. JANAKIAMMAL COLLEGE OF ENGINEERING AND TECHNOLOGY

Seminar on "Routing Issues in Wired and Wireless Networks", on 5th March 2009, co-ordinated by **Balamurugan.A.**

Workshop on "Business Planning and Branding", on 24th March 2009, co-ordinated by **Subramanian.R.**

Workshop on "Advances in Mobile and Wireless Network Technologies", on 25th & 26th March 2009, co-ordinated by **Balamurugan.A.**

Workshop on "IMPAZTO – Drawing and Painting", from 27th to 30th March 2009, co-ordinated by **Viswanathan.P** and **Sunila George.**

Workshop on "Theory and Applications of FEA", on 3rd April 2009, co-ordinated by **Jayaprakash.J.**

BOOKS PUBLISHED

VELAMMAL ENGINEERING COLLEGE

Mary Jeans.S, "Digital Image Processing", published by Scitech Publications, 2009.

STUDENTS

PAPER PRESENTATION

K.S.RANGASAMY COLLEGE OF TECHNOLOGY

Jegadeesh.N and **Kirthika.V**, "Patient safety application using RFID technology", National Symposium on TECHIFZ '09, conducted by Nandha Engineering College, Erode, on 7th March 2009.

Jeevanand.K and **Karthik Raj.G**, "Vein pattern authentication", National Symposium on COMBLAZE 8i, conducted by MAM College of Engineering, Trichy, on 13th & 14th March 2009.

Girija.P and **Aaruthra.G**, "Biometrics", National Symposium on Inferno '09, conducted by Aalim Muhammed Salegh College of Engineering, Chennai, on 13th March 2009.

Raj Mohan.P and **Nagaraj.P**, "Haptic technology surgical simulation and medical training", National Symposium on EXCELON '09, conducted by Excel Engineering College, Namakkal, on 14th March 2009.

Jeevanand.K and **Karthik Raj.G**, "Palm vein authentication", National Symposium on CTRIX '09, conducted by CSI College of Technology, Kanyakumari, on 16th & 17th March 2009.

Vairaprakash.A and **Manoj.G**, "Wi-Fi Technologies", National Symposium on ITIGNITE, conducted by National Engineering College, Kovilpatti, on 18th & 19th March 2009.

Somanathan.G and **Dinesh.K**, "Bluetooth used in roadways", National Symposium on ITIGNITE, conducted by National Engineering College, Kovilpatti, on 18th & 19th March 2009.

Rajani.S and **Sasikala Devi.M**, "Sensor Networks", National Symposium on TEK-A-TETE, conducted by CSI College of Technology, Kanyakumari, on 19th & 20th March 2009.

Thangamani.G and **Santhosh.B**, "Wireless Networks" on National Symposium on TEZFULERZA '09, conducted by Sasurie College of Engineering, Erode, on 26th March 2009.

Kiruthika.V and **Girija.P**, "Bluetooth", National Symposium on Techno Spark '09, conducted by Sengunthar College of Engineering, Tiruchengode, on 30th & 31st March 2009.

MEPCO SCHLENK ENGINEERING COLLEGE

Girithara Prasanth.R.N and **Nagaprasanna.S**, "Thermal theme", Technical Symposium on Dynamech '09, conducted by PSR Engineering College, Sivakasi, on 11th March 2009 and won first prize.

Ganesa Lakshmi Nagaraj and **Viveganant h.M**, "CAD modelling", National Symposium on Dynamech '09, conducted by PSR Engineering College, Sivakasi, on 11th March 2009 and won first prize.

Ram Kumar.S and **Hari Sudhan.D**, "Broadband communication receiver for high speed data transmission", National Symposium on ABHIVART '09, conducted by Mepco Schlenk Engineering College, Sivakasi, on 12th March 2009 and won first prize.

Balasubramanian.G and **Ganesh Kumar.M**, "Criminal identification using cell phones", National Symposium on DESCARO '09, conducted by Karpagam College of Engineering, Coimbatore, on 12th & 13th March 2009 and won second prize.

MOUNT ZION COLLEGE OF ENGINEERING AND TECHNOLOGY

Prabahar.M and **Edward Swarnaraj James**, "Easy Ticketing System", National Conference on Advances in Computing, conducted by Kalasalingam University, Virudhunagar, on 16th & 17th March 2009.

SPORTS

MEPCO SCHLENK ENGINEERING COLLEGE

Cricket team was placed first in the District Sports event organized by Anna University Tirunelveli at Mepco Schlenk Engineering College, Sivakasi, from 14th to 19th March 2009.

Table Tennis team was placed first in the District Sports event organized by Anna University Tirunelveli at Velammal College of Engineering and Technology, Madurai, on 29th & 30th March 2009.

Tennis Team was placed first in the District Sports event organized by Anna University Tirunelveli at Velammal College of Engineering and Technology, Madurai, on 29th & 30th March 2009.

MOUNT ZION COLLEGE OF ENGINEERING AND TECHNOLOGY

Kabaddi team won the Runner up in Kabaddi tournament at TIES '09, conducted by Jayam Engineering College, Dharmapuri, from 2nd to 5th March 2009.

NSS

MOUNT ZION COLLEGE OF ENGINEERING AND TECHNOLOGY

Organized an Eye Camp in association with Mahatma Eye Hospital, Trichy, on 6th March 2009.

Organized NSS camp at Pulivalam Villiage, Pudukkottai District from 23rd to 29th March 2009.

SRINIVASA INSTITUTE OF ENGINEERING AND TECHNOLOGY

Organized special camp on free eye screening camp, mega road show at Panavedu Thottam Village, Thiruvallur District, from 14th to 20th March 2009.

MEMORANDUM OF UNDERSTANDING

V.L.B. JANAKIAMMAL COLLEGE OF ENGINEERING AND TECHNOLOGY

Signed an MoU with M/s. Small Industries Testing and Research Centre (SITARC), Coimbatore, on 11th March 2009.

The Syndicate of Anna University Chennai in its 196th meeting on 15.05.2009 decided to award Ph.D degree to the following research scholars

Name of the Research Scholar	Name of the Supervisor	Title of the Thesis
FACULTY OF CIVIL ENGINEERING		
Hemalatha.G	Jaya.K.P	Passive tuned mass damper for seismically excited structures
Krishnaswami.B.N	Natarajan.P	Durability aspects of high performance concrete
FACULTY OF MECHANICAL ENGINEERING		
Prabhushankar.G.V	Devadasan.S.R	Design and development of innovative six sigma quality management system for automotive components manufacturing sector
Ramesh Kumar.A	Udayakumar.M	Thermodynamic and heat transfer studies on GAX (Generator-Absorber-Exchange) absorption compression system
Murugan.M	Selladurai.V	Analysis on cell formation in cellular manufacturing systems towards optimal performance
Sankaran.R.A	Senthil.V	Investigations on engineering innovation through quality function deployment and quality costing
Nithiyanandam.S	Srinivasan.P.S.S	Studies on energy conservation aspects in industrial compressed air supply systems
FACULTY OF ELECTRICAL ENGINEERING		
Udhayakumar.K	Lakshmi.P	Design of advanced robust controllers for variable structure system
FACULTY OF INFORMATION AND COMMUNICATION ENGINEERING		
Kavitha.V	Easwarakumar.K.S	Efficient techniques for enhancing privacy and information assurance
Hari Kumar.R	Sukanesh.R	Investigations on soft computing techniques and non-linear models for performance analysis and classification of epilepsy risk levels from EEG signals
Paramasivam.K	Gunavathi.K	Investigations of certain methodologies for minimizing the power dissipation during testing of VLSI circuits
FACULTY OF SCIENCE AND HUMANITIES		
Thulasiraman.V	Saroja Devi.M	Synthesis, characterization and properties of novel cyanate ester, cyanate ester/epoxy blends and composites

Name of the Research Scholar	Name of the Supervisor	Title of the Thesis
Yogalakshmi.K.N	Kurian Joseph	Performance of membrane bioreactor under shock load conditions
Harini Santhanam	Amal Raj.S	Coupled biogeochemical and biophysical model for Pulicat Lagoon
Thangadurai.C	Murugan.V	The influence of codon content and mRNA secondary structure on heterologous protein expression in E.Coli
Vasanthi.T	Arulmozhi.G	Reliability analysis of some communication networks, software and shared load models
Somanathan.T	Pandurangan.A	Synthesis of well architectured single and multi walled carbon nanotubes using metal substituted MCM-41 molecular sieves by CCVD technique
Saravanan.C	Kannan.P	Studies on co-poly (Decyloxymethacrylate)s containing fulgimide and azobenzenes in the pendant for dual mode optical switches
Kuchibolla Venkata Siva Ramana	Kaliappan.S	Influence of environmental parameters on corrosion of offshore structures
FACULTY OF MANAGEMENT STUDIES		
Senthil Raja.C.S	Krishnaveni.R	Research on the knowledge management practices and its benefits IT South Indian in organizations

IMPROVE YOUR GK

1. The formula HCL stands for
2. The formula H_2SO_4 stands for
3. The formula $CHCl_3$ stands for
4. The formula H_2O_2 stands for
5. A fungus which can only survive on other living organisms is called
6. A plant which lives in the dark is called
7. A plant adapted to live in dry places is called a
8. A plant adapted for growth in water is called a
9. Bifocal lens was invented by
10. Cement was invented by

ANSWERS

1. Hydrochloric Acid
2. Sulphuric Acid
3. Trichloromethane
4. Hydrogen peroxide
5. Obligate Parasite
6. Scotophyte
7. Xerophyte
8. Hydrophyte
9. Benjamin Franklin
10. Joseph Aspdin

Research Centres of Excellence

AU-KBC RESEARCH CENTRE

The AU-KBC (Anna University – K B Chandrasekhar) Research Centre in the MIT (Madras Institute of Technology) Campus of Anna University, Chennai, has its core vision of becoming a multidisciplinary research institution of global standing pursuing the twin goals of

- *Extending the frontiers of Scientific Knowledge through high quality research*
- *Generating Technologies and Products of economic and social value*

The Research programs of the Centre combine the Academic with the Industrial, the Theoretical with the Experimental, the Long-term with the Short-term – and cover the areas of ***Life Sciences*** and ***Information Sciences.***

The Centre represents a pioneering effort in Public-Private-Partnership (PPP) in Research in India. It also works with a unique perspective on how a university-based research laboratory can become financially self- supporting through a judicious use of its expertise, skills and resources. The achievements that the centre has realized with in a relatively short period of time working with such a paradigm is making it an attractive model for broad-basing India's research efforts in a scalable and sustainable manner

Core Facilities and Infrastructure at the Centre

The Centre has an independent built-up space of about 15000 sq. ft. area, consisting of air-conditioned labs, conference rooms, class rooms, etc. Stabilised power with full UPS and Diesel Generator backup, a high-end 120-node networked computing environment with a broad band leased line Internet access, Communication facilities, a pantry, etc. are available on a 24x7 basis.

The Centre has the following major laboratories open round-the-clock: A Wet Biology Lab focusing on nano-scale and single-molecule biology studies with advanced instrumentation and facilities, a Bioinformatics Lab, a Communication and Network Security Lab, a Natural Language Processing Lab focusing on Knowledge Discovery techniques, and a Free/Open Source Software Lab.

Additionally, scientists and students at the Centre can get access to the other laboratories and facilities of the University on the basis of collaborative programs with the concerned departments.

The Centre also has access to the common infrastructure of Anna University in both the MIT and the Main campuses, such as the libraries, seminar halls, guesthouses, cafeteria, auditoria, etc., following the university norms.

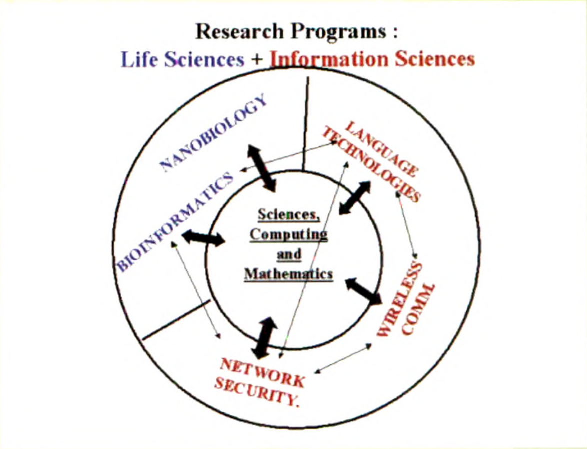
Growth Plans of the Centre

In the next five years, the Centre plans to reach the following level-

- L.S. area focussed on Human Diseases and Drugs, with emphasis on early and rapid detection/diagnosis of diseases
- I.S. area focused on automated Knowledge Discovery/ Decision Support Technologies
- Over 300 persons strong, with around 30 P.I. s

- 40,000 sq. ft space, annual budget Rs.100 million, corpus of Rs.200 million
- 3-4 high impact companies launched based on our I.P. s

Research Programs

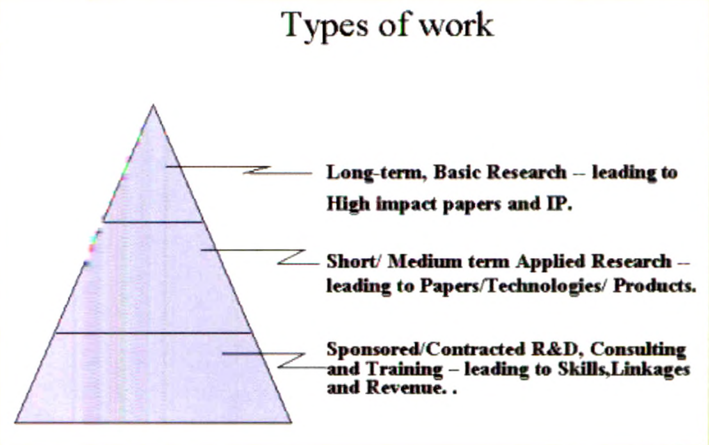


Right from its inception, AU-KBC Research Centre has laid great emphasis on Multidisciplinary and Interdisciplinary work in all its activities and programs. This followed partly from its focus on application-oriented work where the requirements of the end-application dictates the types of disciplines that would be needed, and partly from the understanding that the new forms of knowledge that would be needed in the future would not fit tightly into any of the existing silos, but would necessarily cut across many of them. Advancements in the science of Mathematical Modeling and Computing has in particular facilitated development of understanding across disciplines even at the levels of working scientists. Our centre has had two broad divisions from its very inception—

- Division of Life Sciences (LS)
- Division of Information Sciences (IS)

Work in Life Sciences has two components – Experimental research emphasizing biological processes at the single-molecule, nano-scale levels, and studies of similar phenomena using Bioinformatics and Modeling approaches and tools. Under the Information Sciences division, activities are currently being pursued in the areas of Language Computing and Knowledge Discovery, Wireless Communications, and Cryptography and Network Security.

Work across disciplines is facilitated by the emphasis that has been given to the Sciences, Mathematics and Computing in the Centre.


Types of work
Long-term, Basic Research – leading to High impact papers and IP.
Short/ Medium term Applied Research – leading to Papers/Technologies/ Products.
Sponsored/Contracted R&D, Consulting and Training – leading to Skills,Linkages and Revenue. .

In terms of their objectives, all work at the Centre can be broadly categorised into three levels-

- Long term and basic research programs — leading to high impact papers and IP (Intellectual Property)
- Short/Medium term applied research programs — leading to Papers, Technologies and Products
- Sponsored/Contract R&D, consulting and training programs – leading to skill-development, linkages and revenue

Irrespective of the level involved, all of them contribute to either or both of the following components of the Centre's vision:

- *Extending the frontiers of Scientific Knowledge through high quality research*
- *Generating Technologies and Products of economic and social value*

While the Scientists at the Centre are free to decide which level they would like to concentrate on with in the larger goals and priorities laid down by the Centre, most of them normally attempt to combine activities at different levels so as to realise their full potential.

Academic Programs

The M.S.(By Research) and Ph.D. Programs of the Anna University in all the areas of Information Sciences and Life Sciences are offered at the AU-KBC Research Centre as per the rules and regulations of Anna University. The programs prepare the Scholars for careers in R & D and Entrepreneurship at the highest levels through a unique combination of rigorous course work, strong interdisciplinary exposure, choice of problems at the cutting edges of emergent technologies, as well as strong linkages with other centres of advanced R & D in India and abroad. The Centre collaborates closely with the other departments and centres of the university in its academic programs, and thus contributes to raising the level of the academic and teaching programs of the University. Facilities exist for Full Time as well as Part Time programs. Admission to these programs are through the normal admission processes of Anna University, and are normally available for the January and July semester, details of which are announced on the University website, www.annauniv.edu

Training Programs

- Third Batch of Anna University-Apollo Hospitals One year Advanced Certificate Course in CLINICAL TRIAL MANAGEMENT
- Some of the firms who have hired persons trained by us
- Part Time Certificate Program in Clinical Research
- Second Batch of Anna University-Apollo Hospitals One year Advanced Certificate Course in CLINICAL TRIAL MANAGEMENT
- First Batch of Anna University-Apollo Hospitals One year Advanced Certificate Course in CLINICAL TRIAL MANAGEMENT
- Announcement for the Part Time/Full Time Program in CLINICAL TRIALS MANAGEMENT
- Three months Certificate Programme in Drug Discovery and Development through Bioinformatics

Products, Technologies and Training

One of the goals of the Research Centre is the development of Products, Technologies, Patents and Training in the areas of its research work. These are jointly owned by Anna University and KBCRF Pvt. Ltd., and the latter has commercialisation rights over them. *Svapas Innovations* situated close to the campus provides an avenue for commercialization of the research findings from AU-KBC Centre.

The following are some of the items that have been generated through research at the AU-KBC Centre-

A. *Technologies and Products:*

Network Security

- A hardware-based Security Trainer Platform, *i-SecurIT* — in the market
- A hardware-based solution for web site defacement, *Webgaurd* — being commercialised.
- Affordable PKI Package for implementing Digital Signatures and Digital Certificates in Enterprises
- Portable Secure Mailer/Dynamic Password Authentication Tool
- Wireless/WLAN- WiFi and WiMax Security Solutions

Language Technologies and Knowledge Discovery

- Indian Language Search Engines
- Translingual Information Accessor for classified advertisements.
- Machine Aided Translation involving Tamil
- Automated Patent Document Analyser
- Information Extraction from unstructured data
- Computing tools and resources for Indian Languages – Spell checker, Morph analyser, Wordnet, Parallel corpora, Dictionaries, POS taggers, etc.

Life Sciences

- A knowledge discovery engine for Biomedical research
- Biosensor-based Instrumentation for detection and diagnosis of infectious diseases
- An *anti-angiogenesis* drug lead for cancer detection and treatment
- Nano scale imaging/sensing Technologies for Bio molecules

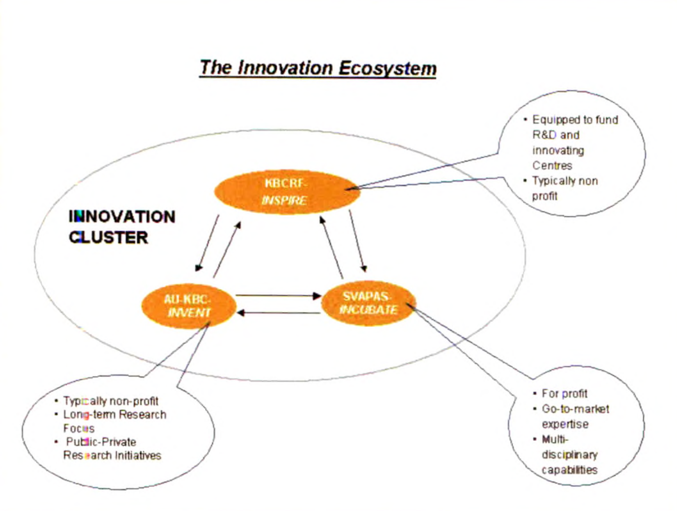
B. *Training Programs*

- Corporate Training and Consulting in Wireless focusing on WiFi and WiMax
- Wireless Products testing and calibration
- Bioinformatics training courses focusing on Drug Discovery, Bioinformatics Tools, Clinical Research
- Free/Open Source Software (FOSS) Training and Consulting
- Cryptography Training courses

C. Patents

- Multiuser Indoor Wireless Access Methods and Systems based on OFDM Transmission Technique
- Anti-angiogenisis drug lead for cancer detection

The Innovation Ecosystem



A University-based Research Lab can not by itself realize the goals of economic and social value creation through its research. It can only go as far as creating a Proof-of-Concept (POC) based on its research findings; it cannot make it market-ready. It is in fact counter productive for the research laboratory and its scientists to attempt commercialization of its research-findings from with in the ambience and culture of the research laboratory.

A complete ecosystem of Invest-Invent-Incubate has to be in place for research to lead to value-creation, and the AU-KBC Centre works with in such an environment. The KBC Research Foundation (KBCRF) Pvt. Ltd., a not-for-profit company provides financial support to the Research Centre under an agreement of joint IP ownership and right-of-first-refusal. Svapas Innovations Pvt. Ltd. provides productisation, incubation and marketing support to KBCRF for commercialization of its IP s. The revenue that accrues to KBCRF through this operation is shared with all the involved players, as well as ploughed back into research.

QUOTES

When asked, "What in your leadership enabled you to create so many millionaires," Andrew Carnegie replied, "You get what you seek in life. If you seek dirt, you find dirt. I sought gold in my people and they turned out to be my gold mines."

* * *

Socrates said, "Before you talk to me about anybody, take a triple filter test. The first filter – are you certain that it is true? The second filter – is it something good? The third filter – will it be useful to me? If it is neither true nor good nor even useful, why tell it to me at all?"

Chennai City – Urban Form, Urban Image & Form Based Code

1. Introduction

The building of cities has a long and complex history. Although city planning as an organized profession has existed for less than a century, all cities display various degrees of forethought and conscious design in their layout and functioning. Controlling and regulating system approach in planning has been developed as health codes, sanitary codes; etc. and further zoning as an approach in planning aimed at attaining a healthy environment to the congested and polluted cities. However, the city should also be in the best sense made by art and shaped for human purposes. In the context of the city of Chennai city image and form have been completely ignored while preparing the Development plan and formulating the Development Control Rules (DCR). At this juncture the importance of the new approach towards developing a Form Based Code for the city of Chennai is thought for towards achieving a better form and image by developing the FBC for Chennai.

2. History & Growth of Chennai City Form

The name of Madras is said to be derived from *Madraspatnam,* a village that existed here prior to the settlement of the English. This region had a number of settlements-Mylapore, Triplicane Egmore, Purasawalkam Tiruvanmiyur and Aminjikarai- which grew around a nucleus of a temple and had their own history the most important areas at that time being Mylapore and Triplicane. Earthen cart tracks linked these settlements which later became important means of communication. The Portuguese arrived in 1522 and constructed a fort and settlement in Santhome. In 19—the British arrived here and constructed a Fort at the site. The New Town, which grew up around it, came to be known as Chennapatnam in honour of the father of the local chieftain. This name was later applied to the whole city. The population which was 19,000 in 1646, expanded to 40,000 in 1669.

When the British started living along the Cooum River, roads were laid to give access to them and thus Marshalls Road, Halls Road, Montieth Road and Casa Major Road all became thoroughfares even in 1798. Mowbrays Road and Royapettah High Road were formed at this time. The land west of George Town was a low-lying swampy area and remained vacant without development. The surroundings of the Fort area covering *nearly 69 kms and containing within it 16 hamlets were constituted as the City of Madras in 1798.*

Before 1800, the roads were in a radial pattern but after 1810 ring roads were developed inside the City. Mount Road was important and was connected to Triplicane High Road, Chamiers Road, Edwards Elliot's Road and Royapettah High Road. To the North of Mount Road, Pantheon Road, Halls Road, Marshalls Road, Spur tank Road and Nungambakkam High Road were formed to serve the residential areas. Later Brick Kiln Road and Perambur Barracks Road connected Poonamallee High Road with Konnur Road, which was extended towards the Railway.

3. Chennai City- The development of Urban Form & Image

The City is at the core of the metropolitan area and is the centre for all commercial and social activities as well as a living area for majority of the total population. Its *structure approximated to a semi-circle with extensions in five main directions, the North, Northwest, West, Southwest and South. This is due to the fact that early in the development of the city, George Town and Harbour became the commercial centre of the City. Naturally all communication lines led to this centre and these in turn were linked with each other producing a radial and ring pattern of development.* When the City grew, lands on the main arteries were much nearer in terms of time needed to reach the centre than areas, which were away from them, and further expansion took place on these arteries. *The economics of transportation has*

Growth population & Density of Chennai City - (1901- 2001)*

Year	1901	1911	1921	1931	1941	1951	1961	1971	1981	1991	2001
City Pop	5.41	5.56	5.78	7.13	8.65	14.27	17.49	24.69	32.85	38.43	43.44
Area in sq.km	68.17	68.17	68.17	68.17	77.21	128.83	128.83	128.83	176	176	176
Annual growth rate	—	0.27	0.39	2.12	0.69	-0.11	2.06	3.51	-0.27	1.58	1.23
Pop density/ Hectre	80	82	85	105	112	111	136	192	187	218	247

*(Source: Master Plan Chennai 2021)

led to formation of development corridors the most important of which are on the west and southwest where, physical conditions were more favorable for development.

The radial type of development has created green wedges, the edges of which in some cases penetrate into the City boundary itself. The main communication routes were lined with industrial establishments and shopping but the development is diffused and could not be termed "urban" except in uses. The real rural area was not far from these corridors and urbanisation had scarcely touched those areas either in the physical or social sense.

4. Chennai City - Master Plans & Development Control Regulations

The purpose of Master plan seeks to lay out a physical pattern of land use and transportation routes for *the city or metropolitan area as a whole*, as a guide for public agencies that are expected to conform their sectoral programming to the plan while constraining private investments in the same manner. The success of any plan depends on several factors: *clear enunciation of objectives, setting of realistic physical targets, allocation of adequate financial and other resources, commitment of implementing departments and agencies, investment climate, private initiative and involvement, participation of stakeholders at every stage of planning and implementation, political will and public cooperation.*

Development control, which forms part of the master plan, is the process by which the society represented by locally elected councils regulates changes in the use and appearance of the environment. The development control function is itself difficult to define.

From the beginning of time, the building of human settlements has been guided by norms of behavior-rules for how paths of movement and communal spaces should be organized and how one building and the purposes it serves, should relate to others. All kinds of people are involved in making decisions about the way cities should be built and in actually constructing them: Politicians, lawyers, developers, sanitation engineers, architects, planners, individual business people, and households. The power to make decision about city form, indeed the whole quality of life of people, is unevenly distributed. The public sector plays a major role in shaping the city, for much of the urban area is in public ownership. The coordination can take place in two ways. (1) By setting the design polices and guidelines for such developments, allowing other people to make their own decisions within them or (2) by having one set of hands in control of the whole design and development process.

5.1 Chennai- First Master Plan

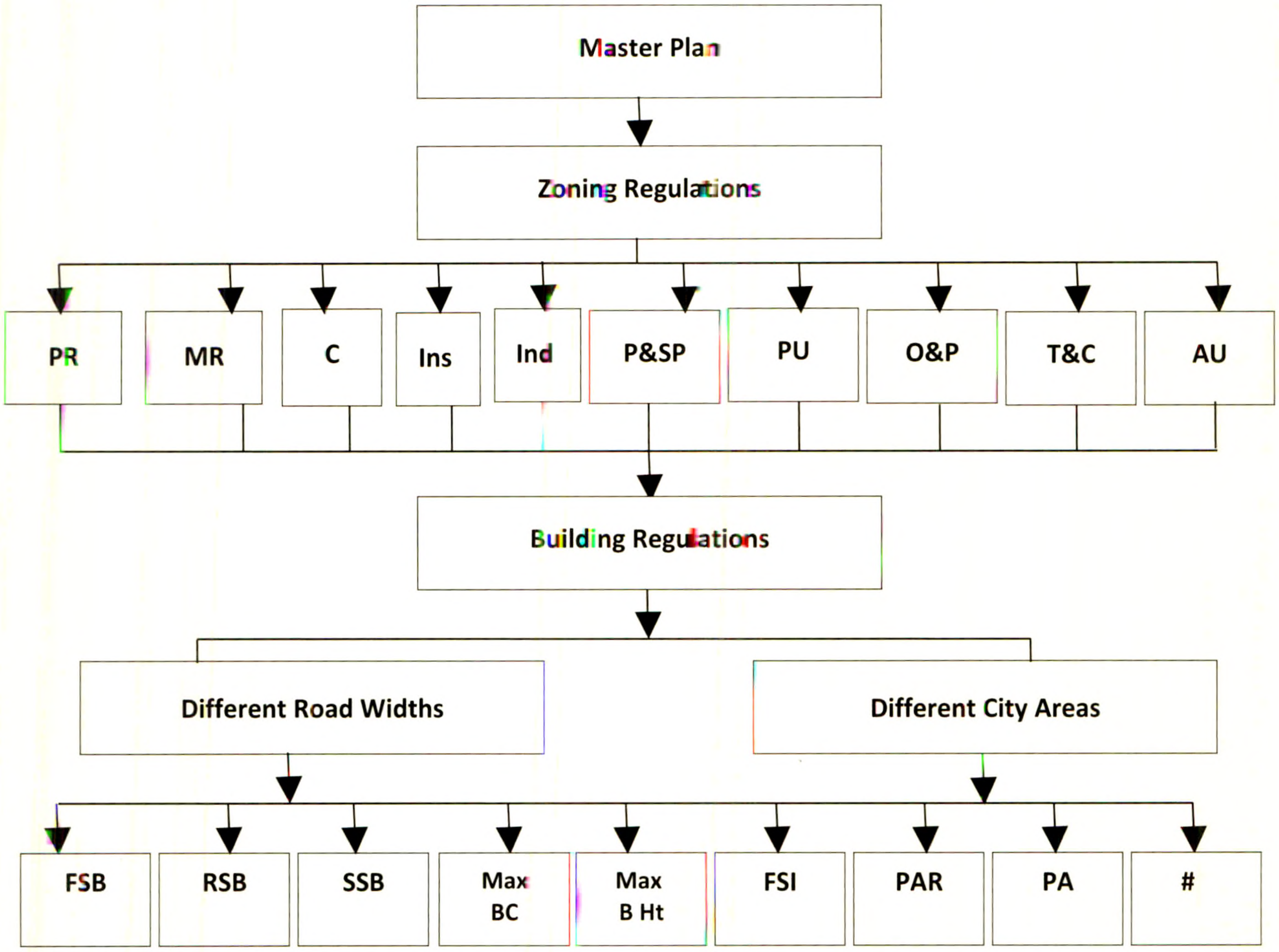
A metropolitan city was thought to provide for

1. Choice
2. Personal interaction and participation
3. Comfort
4. Efficiency and Environment
5. Growth and adaptability
6. Imageability
7. Economy in cost

Some of these choices were contradicting with each other by their very nature. Hence, a study on basic urban structures was done with Copenhagen, London, Paris, Washington DC, Kolkata and Delhi, Mumbai as examples and developed three alternative models.

Alternative 1 – Ring of Cities

This city can extend and all new developments would be planned with in 30 miles radius. Beyond this, there would be a semi circular green belt; all further developments would be planned as daughter cities, with a population of 4.5 lakhs each.



PR- Primary Residential

MR- Mixed Residential

C-Commercial

Ins- Institutional

Ind-Industrial

P&SP- Public & Semi Public

PU- Public Utilities

O & P- open spaces & Parks

T&C- Transportation & Communication

AU- Agricultural

FSB-Front Set back

RSB-Rear Set Back

SSB-Side Set Back

Max BC-Maximum Building Coverage

Max B ht- Maximum Building Height

FSI-Floor Space Index

PAR- Parking

PA- plot Area

NF- No of Floors

Alternative 2 – Development along major radial routes along with independent communities detached from the main body.

Alternative 3 – Development only along the radial corridors with no additional towns, communities around the mother city.

The Final Proposed Form of Development as per the first master plan was development of three satellite towns, one each on the three main radial corridors via Gummidipoondi, on the north corridor, Thiruvallur, on the west corridor and Maraimalai Nagar on the south west corridor were planned, each with a population of 1 lakh. This had the advantages of all three alternatives. The Master Plan included spatial plans for CMA with land use zoning and set the urban form during the plan period.

5.2 Chennai- Second Master Plan

A co-ordinated and integrated approach among the various agencies involved in urban development is the need of the hour. Participatory process in planning is equally important and review and implementation of the plan at the local body level is a must to achieve the objectives of making this metropolis more livable and of international standard.

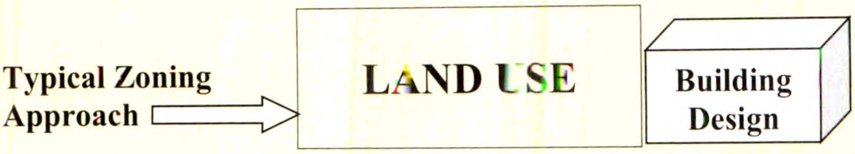
Though Madras Town Planning Act was enacted in 1920 itself and a few Detailed Town Planning schemes were sanctioned for small areas within the Chennai City, *no comprehensive plan for city or metropolitan region was prepared.* The Madras Town Planning Act was superseded in 1971 by the Tamilnadu Town and Country Planning Act. According to section 17, sub-section (2) of the Act, *the Master Plan may propose or provide for all or any of the following matters, namely the control of architectural features, elevation and frontage of buildings and structures. And this has never been done or incorporated in the vision of the master plan.* The *Chennai City Corporation with 176 sq.km area* may have to accommodate about 59 lakh populations.

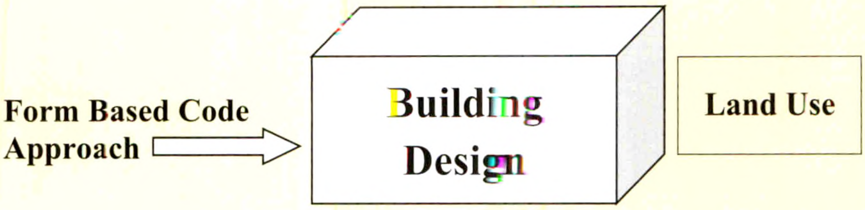
Chennai Metropolitan Area comprises of the area covered by ***Chennai City Corporation (Chennai District) of area 176 sq.km comprising of 155 wards (villages/Local Bodies) in 10 corporation zones,*** *16 Municipalities, 20 Town Panchayats and 314 villages forming part of 10 Panchayat Unions in Thiruvallur and Kancheepuram Districts. It extends over 1013 Sq.Km and has a population of 7.04 million as per 2001 census. Chennai has a* ***very heterogeneous mix of architectural style*** *ranging* ***from ancient temples to British colonial era buildings and to latest modern buildings.*** *Most of the buildings constructed during colonial era are of* **Indo-Saracenic style**. *Chennai is a major transportation hub for road, rail, air and sea transport connecting major cities inland and abroad and is one of the major educational centres in India with a number of colleges and research institutions. Chennai is thus emerging as an important metropolis in the South Asian region.*

Vision 2026 is to make Chennai a prime metropolis which will be more livable, economically vibrant and ***environmentally sustainable*** *and* ***with better assets*** *for the future generations* The methodology adopted to achieve this said vision is completely lacking in the policies and development control regulations at the proposal level.

5. Form Based Code (FBC)

"A form-based code is one that is based primarily on "form"—urban form, including the relationship of buildings to each other, to streets and to open space, rather than based primarily on land use. "A Form-Based Code is a development code that provides the developer/applicant greater flexibility in permitted land uses in exchange for more stringent regulations controlling urban form. These types of codes support mixed-use, pedestrian-friendly and mixed housing development more effectively than conventional codes do because they provide greater guidance on how buildings are expected to face the street, adjacent residential neighborhoods and open spaces. Form-Based Codes are becoming increasingly attractive to municipalities that want greater control over how buildings look and feel.





6.1 Form-based codes are

i. Municipal development regulations that go beyond the conventional zoning controls of segregating and regulating land use types and defining building envelopes by setback requirements and height limits. Form-based codes instead address the details of relationships between buildings and the public realm of the street, the form and mass of buildings in relation to one another, and the scale and type of streets and blocks. Form-based codes are based on specific urban design outcomes desired by the community, which may be identified through an inclusive, design-focused public participation process. The regulations in form-based codes are applied to property through “regulating plans” that map the community with geographic designations that are based on the scale, character, intensity, and form of development rather than differences in land uses.

ii. Type of development regulation whose intent is to create a predictable public realm through the physical definition of urban form.

iii. Techniques for regulating development to achieve a specific urban form. Form-based codes create a predictable public realm by regulation of physical form primarily (and land use secondarily) according to the timeless principles of traditional urbanism.

6.2 The advantages of Form-Based Codes are

i. Form-based codes are better at illustrating community plans and vision

ii. Building and street design is coordinated

iii. Urban form is more predictable

iv. A more gradual transition between adjacent areas with different development intensities is easier to achieve

v. Can specify the tapering of height, bulk, massing and lot coverage of buildings toward residential and/or natural edges

vi. High density development is more carefully designed, attractive and compatible

6.3 Graphic and Process Standards

Form based code’s focus on the physical character and quality of public space does differ from the quantitative concerns of its predecessor, Euclidean zoning. Zoning is a component of public policy. Policy is one of a trio of controls that shape land and building development along with designs and management vary according to type of environment. Form base Codes have emerged as the preferred instrument for implementing new urbanist ideas of all scales and all settings: Greenfield, brown field, infill and both public and private projects. The practice of Form Base Coding is centered on a theory, a process, and a format. The theory and process are common to all practitioners. The format is particular to each zone/area.

Conventional Planning and zoning Codes	Form-Based Codes
Auto-oriented, segregated land-use planning principles.	Mixed use, walkable, compact development oriented principles
Organized around single use zones	Based on spatial organizing principles that dentifies and reinforce an urban hierarchy, such as the rural to urban transect.
Use is primary	Physical form and character is primary, with secondary attention to use.
Reactive to individual development proposals	Proactive community visioning
Proscriptive regulations, regulating what is not permitted, as well as unpredictable numerical parameters like density and FAR	Prescriptive regulations, describing what is required, such as build-to-lines and combined min and max building heights
Regulates to create buildings	Regulates to create places

6.4 The Different approaches for formulating FBC

There are a number of different approaches that can be taken in determining how the form-based code will be defined and regulated. Although there is some overlap between these approaches, Crawford describes four basic alternatives that are typically used by different practitioners:

- Neighborhoods
- Districts
- Corridors
- Transect
- Street-based regulating plan
- Special purpose zones

This process entails identifying which parts of the community are appropriate for different types of development.

6.5 Form-based codes can take several forms

The Different Forms of Form Based Codes and the methods adopted are given below.

DIFFERENT FORMS OF FBC METHOD

Street-based	The Regulating Plan locates private realm development standards by street type; that is, the development standards for all site and building characteristics is governed by the site's relationship to pre-defined street types. In addition to setting the private realm standards, the Regulating Plan defines elements within the public realm (e.g. sidewalks, travel lanes, on-street parking, street trees, street furniture, etc.). This type of form-based code can be useful for areas where streets have not yet been platted.
Frontage-based	The Regulating Plan locates private realm design standards by frontage type; that is, the development standards for all site and building characteristics is defined by the edge condition where it meets the primary street (frontage). Frontage-based FBCs may also define street type, but the development standards are not (or not always) tied to street type. This type of form-based code can be useful for areas where streets are already designed and/or built.

DIFFERENT FORMS OF FBC METHOD

Street-Frontage Hybrid	Development standards are tied to specific frontage/street combinations.
Building Type-based	The Regulating Plan controls the locations of pre-defined building types. The development standards define the configurations, features, and functions of buildings.
Transect-based	The Regulating Plan articulates a cross section of street types, frontage types and/or building types along an urban/rural continuum to understand where different uses or building types fit or are inappropriate. The "pure" transect-based FBC uses the Smart Code transect with clearly defined zones fromT1 to T6 this system was first created by DPZ (Duany Plater Zyberk).
Modified Transect	The concept of the transect is modified to correlate with the existing or zoned local urban to suburban characteristics.

The different options for Implementation of FBC

Form-based codes replace existing zoning codes and can be either mandatory or optional. There are several options for implementation

The Different Implementation options	Implementation Process
Integrated	A form-based code can be can be integrated into the existing code, applied as a "by right" designation to selected zones, and cross-referenced to existing code provisions, such as administrative procedures and/or land uses.
Optional parallel	Alternatively, it can take the form of an optional parallel code system—a self contained special chapter with unique provisions, not cross-referenced to other parts of the code, available as an option in designated zones.
Floating zone	Finally, an FBC take the form of a floating zone (either integrated or optional/ parallel) which is triggered by an application to rezone a property.

6. Conclusion

From the study of Chennai with the growth pattern and history, it is very clearly understood that Chennai has grown multifold from a small hamlet to a metro city. The image of Chennai city is no longer can be visualized as a single entity. Most generally an image is an internalized representation and, regarding the environment, it is "an individual's mental representation of the parts of external reality known to him via any kind of experience". The term image stands for notion, stereotype, plan or map, plan of action, concept, self concept and so on. It is used to emphasize that city has different meanings for different people- the slum dweller, commuter, geography teacher or planner and so the city has multiple images. At this juncture the design of the city, which is regulated by the Master Plan and Development Control Rules, has to be reframed with the vision of multiple images and Form existing in different parts of the city and should be enhanced by framing Form Based Code for different areas rather than regulating with the Development Control Regulations (DCR) for the entire city.

Ms. N.Jothilakshmy, Research scholar and
Dr. Ranee Vedamuthu, Professor and Chairman, Faculty of Architecture,
School of Architecture & Planning, Anna University, Chennai

THE IMPLICATIONS OF I.T. POLICY OF TAMIL NADU ON URBAN DEVELOPMENT IN CHENNAI METROPOLITAN AREA

Tamil Nadu is one of the front runner States in India in promoting I.T. industry, with good physical infrastructure and sound industrial policy. The State with a population of 62.4 million as per 2001 census is one of the most urbanised states accounting for 9.6 % of the country's urban population. Served by an extensive road network, providing links between urban centres, agricultural markets and rural habitations, The international airport located in Chennai is the third largest in India. Tamil Nadu has three major ports namely, Chennai Port, Ennore Port and Tuticorin and 14 minor ports. Tamil Nadu's installed power generation capacity of 13,276 MW is the second largest in India. The state has a tele density of 8 against the national average of 5.1. Chennai has the largest bandwidth of 13,520 Gbps.[1]

The state has well developed educational infrastructure (second best in India) and a large reservoir of talents. This has earned a reputation of 'intellectual powerhouse' within India. The state government has set itself the objective of raising the gross enrolment ratio in higher education to from 11.73% to 25% by 2020. The annual turn out of engineering graduates is 94,127. Besides, the state also produces 81531 diploma holders from polytechnics.

As per the policy note 2005-06 of the industrial department, Tamil Nadu is a highly preferred destination for investment. The industrial policy aims at consolidating the existing industrial base and facilitating new manufacturing capacity building based on improved competitiveness. The policy also promotes Foreign Direct Investment and engenders Public Private Partnership. It aimed at achieving 8 per cent growth rate during the X plan (2002-07).

I.T. POLICY OF TAMIL NADU

Recognising the potential of I.T. sector in accelerating economic development of Tamil Nadu, the government has multiplied its efforts to create a business environment in the state that is conducive for rapid I.T. development. What makes Tamil Nadu's I.T. policy unique is its dual-focus on both the 'demand' and 'supply' side of the I.T. market, as well as its willingness to address the 'physical' and 'institutional' infrastructure issues, an objective often neglected by other Indian states.[2]

Salient features of I.T. Policy 1997

The I.T. Policy 1997 of Government of Tamil Nadu[3] identifies the availability of skilled and educated manpower, higher standard of educational institutions, sound infrastructure and lower costs of operations as key elements for the growth of I.T. sector. The Policy attributes the economic reforms 1991 of India and the subsequent reduction of import duties on hardware in 1996 as reasons for Multi National Corporations to export large volumes to India.

The main objective of the policy was to increase domestic and export earnings of software and hardware sectors in the State and to upgrade the quality of life. An important feature of the policy is that all Software industries including Services and Training Institutions in I.T. are entitled to 'industry' status and such units shall be eligible for all concessions and incentives offered to industries. These incentives include:

Fiscal incentives

i) Units in I.T. Parks promoted by Government agencies/private promoters and stand-alone units outside I.T. parks will be entitled for exemption from stamp duty and registration charges at the time of allotment of sites / built up space as in the case of units in industrial estates.

Administrative initiatives

ii) To assist in speedy clearance for private sector I.T. Parks, Electronics Corporation of Tamil Nadu Ltd. (ELCOT) will act as a model agency.

iii) All software industries will be exempted from the purview of Tamil Nadu Pollution Control Act.

Physical incentives

iv) Government will offer relaxation of FSI in metropolitan areas to the extent of 50% for I.T. parks and there will be no locational restrictions for setting up units exclusively engaged in software development / training.

v) State Government will facilitate provision of water, power connection and roads and provide continuous quality power supply in industry rates to all I.T. units.

vi) Dedicated VSNL connectivity / Earth Stations as well as Electronic Telecom facility will be made available for each I.T. park. Government will also help ITP promoters in obtaining necessary cable and satellite links through VSNL/ DOT.

The government will set up Information Technology Parks (ITPIs) at Chennai, Coimbatore, Tiruchirappalli and Madurai in a phased manner through ELCOT during IX plan period in association with private sector.

Salient features of I.T. Policy 2002

Encouraged by the growth of I.T. exports from Rs. 3116 crores in 2000-01 to Rs. 5223 crores in 2001-02 constituting 14.7% of all India I.T. exports, a new I.T.Policy 2002 was framed. The aim of the new policy[4] was to make the entire State a knowledge power house to capture 20% of Indian market by the end of X plan period (2002-07), by projecting Tamil Nadu as the choice for destination of I.T. investments and Government will take effective steps to create brand equity for Tamil Nadu for achieving the same.

The additional incentives offered in the 2002 Policy are enlisted below:

- I.T. companies will be given 50% exemption of Stamp Duty and Registration Fee.
- I.T. parks will be eligible for a FSI relaxation of 100 %.

Some of the important Promotional Initiatives suggested in the Policy are:

- Knowledge Industry Townships (KITs) will be created in the I.T. Highway in Chennai through PPP.

- A Special Purpose Vehicle (SPV) to take forward initiatives to position Coimbatore, Madurai, Tiruchy, Tirunelveli and Salem as the best Tier II cities for I.T. investments.
- Government will launch special drives to make these cities 'vibrant and innovative, customer focused' and conforming to international standards in quality.
- Enabling mechanism will be created so that existing Infrastructure in industrial estates (Perungudi/Maraimalai Nagar/Ambattur) could be put to use by I.T. companies.

Salient features of I.T.E.S. Policy 2005

During 2005, the Government felt the need for framing an exclusive policy for promoting I.T.E.S. for its potential in generating large-scale employment. The new I.T.E.S. Policy 2005 of Tamil Nadu[5] set forth a target of achieving 20% share of export market by capitalising the availability of large pool of talented, educated hardworking English speaking work force and promoting Chennai as well as other Tier II and Tier III cities as preferred I.T.E.S. destination.

To achieve the objectives, the following measures were initiated:

- Government decided that all administrative, physical and infrastructure incentives offered in I.T. Policy 2002 shall be applicable to I.T.E.S. sector also.
- Government of Tamil Nadu will lead as well as encourage the creation of I.T.E.S. Parks in Chennai and other Tier II / Tier III Cities.

Salient features of I.C.T. Policy 2008

In 2006, the I.T. policy in force was reviewed taking into account the progress made by I.T. sector and the aspiration of the state to become a global leader. With this background, the Government brought out the I.C.T. policy 2008[6] in order to sustain and improve the States I.C.T performance capture 25% share of Indian I.C.T production by year 2011.

Some of the Growth Projections of the I.C.T. Policy (2008) given in figure **A** below reflect the current and estimated figures, giving a good indication of the status of I.T. in Tamil Nadu.

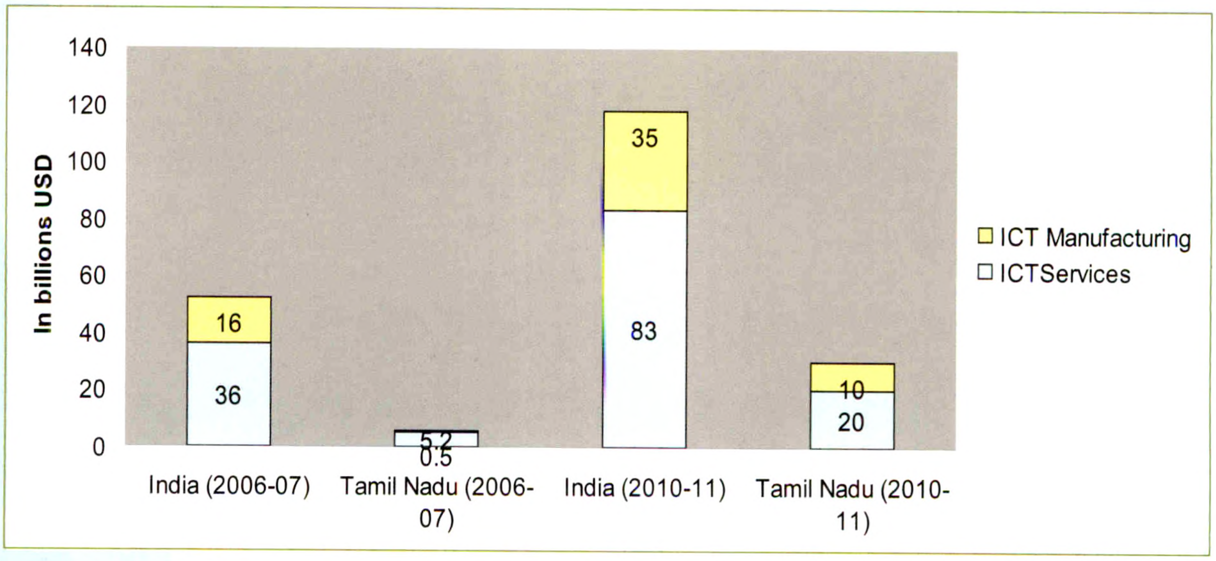


Fig. A – I.C.T. growth projections of the Tamil Nadu I.C.T. policy (2008)

The Policy takes note of the employment opportunity that can be created while achieving economic growth and aims to create 0.8 million direct employment and 2.2 million indirect employment by 2011. The actual and estimated employment in the I.C.T sector in the country and in Tamil Nadu is given in the Figure **B** below:

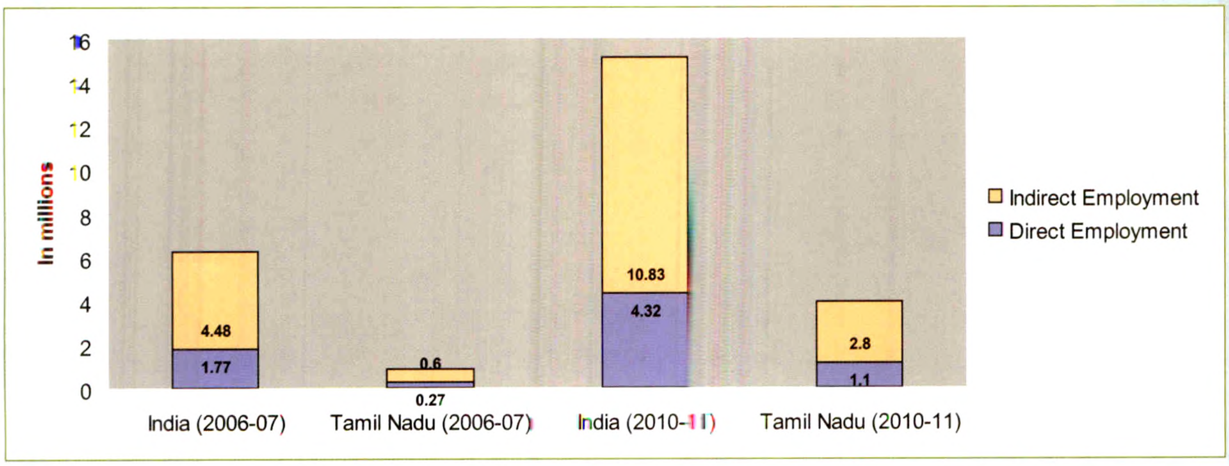


Fig.**B** –I.C.T. employment projections from Tamil Nadu I.C.T. Policy (2008)

Following are some of the steps enunciated in the policy in addition to many of the concessions offered vide earlier policies to achieve the target set forth:

Fiscal incentives

- New I.T.-I.T.E.S. facilities setup in Chennai, Tiruvallur and Kancheepuram districts with a Rs.250 crore investment in 3 yrs eligible for a structured package of incentives.
- The package would be available to I.T.-I.T.E.S. companies who make the investment for own use and would not be available to developers.

Physical incentives

- Except areas falling under CMA Tiruvallur and Kancheepuram Districts, all other locations within Tamil Nadu will be treated as Tier II and Tier III locations.
- Relaxation of FSI (Floor Space Index) to the extent of 100% will be given in designated I.T.-I.T.E.S. Parks all over the State.

Others initiatives

- The Government will promote Coimbatore, Madurai, Trichy, Tirunelveli, Hosur and Salem as destinations for I.C.T. industry in addition to Chennai and its suburbs. The Government will create at least one I.T. Park or an SEZ format in each of these cities.
- Master plan for the development of the cities with special attention to traffic and transportation problems would be prepared.
- Government will take steps to promote housing development near I.T. / I.T.E.S. zones.
- Develop a strong human resource feeder mechanism (to attract local and global talent) and focus on enhancing quality of life by inviting private players to set up quality schools, medical facilities, entertainment zones, restaurants etc.

- The State will take steps to establish institutes of higher learning with focus on research in I.C.T. Sector in collaboration with the Government of India and explore the feasibility of setting up Research Parks in the State.

Analysis of the I.T. policy of Tamil Nadu

While analysing various I.T. policies framed by Tamil Nadu, it is seen that right from inception there is a conscious attempt to link the creation of infrastructure and enabling mechanism to the economic projections. The employment opportunity and the income generated through the I.T. industry have been the attractions for the government to frame investor friendly policies and the impact of the same in urban development is visible.

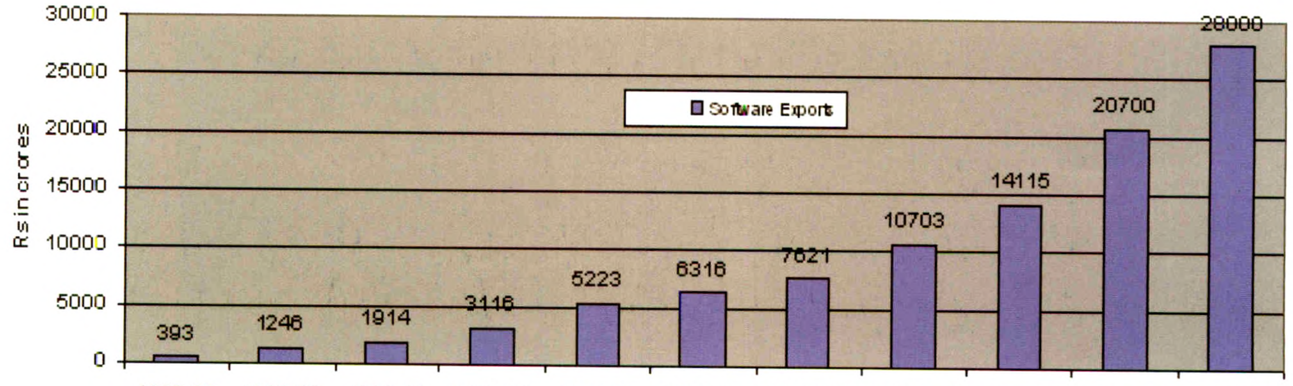
The policy considered the importance of stand alone I.T. parks not only in Chennai but also in other Tier II cities. The government realised the need for encouraging the private sector in creation of built infrastructure and offered incentives in the form of FSI benefits and land use relaxations. Government also decided to promote not only stand alone I.T. parks but also undertake large scale land developments like SIPCOT I.T. parks and Knowledge Industry Townships.

Realising the importance of the role the cities can play in attracting I.T. industries, the policy decides to make the cities more vibrant, innovative and customer focused. The latest policy (2008) goes a step further to prepare master plan development plan for cities projected for attracting I.T. industries. The policy stresses on private participation in strengthening the social infrastructure to enhance the quality of life.

Taking note of the fact that a shift is likely to take place in the form of SEZ units it decides to establish one I.T.-SEZ in 6 Tier II and Tier III cities. If Tamil Nadu has been able to increase its share in the I.T. exports steadily it is largely due to the progressive and dynamic policy resulting in investor friendly urban development policies.

Performance of I.T. industry in Tamil Nadu:

Tamil Nadu's I.T. production has been rising steadily due to the I.T. policy aimed at encouraging investors, creating an enabling environment and investor friendly urban development policies. The growth of software exports in Tamil Nadu has been phenomenal. (Rs. 393 crores in 1997-98 to Rs. 28000 crores in 2007-08). Figure **C** below illustrates the performance of the industry.



(Source: ELCOT and TN I.C.T. Policy 2008)

Fig. C: Growth of Software Exports in Tamil Nadu

The share of Tamil Nadu in national I.T. production has increased from 7% in 1997-98 to 11% in 2007-08 and the state aims to make this 25 % by 2011.

Impact of I.T. policy on urban development policy of Chennai Metropolitan Area

The I.T. policy of the government has emphasised the need for encouraging the private sector in creation of built infrastructure and as a consequence, development control rules of CMDA then in force pertaining to Chennai Metropolitan Area (CMA) were amended in 1998.[7]. I.T. buildings are permissible in any of the six land use zones namely Primary Residential, Mixed Residential, Commercial, Light industries, General industries and Institutional. Further, I.T. buildings are entitled for 1.5 times the permissible F.S.I. subject to certain conditions. Another important feature is that I.T. buildings could be built as Multi Storeyed Buildings (MSB) anywhere within the CMA with maximum height permissible increased to twice the abutting road width.

Since the concessions offered in Development Control rules were exclusive for I.T. related activities, it was necessary to streamline the procedures relating to sanctioning and facilitate early clearance. The Government designated ELCOT (Electronics Corporation of Tamil Nadu Limited) vide G.O. no. 13 dated 16.8.02, as Certifying Authority for the purpose of development of I.T. parks and for availing exemption from F.S.I and other norms of CMDA.

On scrutiny, ELCOT issues No Objection Certificate based on which CMDA processes application for planning permission, wherein applicant can avail the provisions of G.O. no. 169 of Industries (MIE) Department dated 12.09.96 issued in connection with Small, Medium and Large scale industries. As per the G.O., applicants are eligible to commence construction on filing application without having to wait for planning permission.

On obtaining a NOC from ELCOT, the application needs to be forwarded for Planning permission to CMDA through the specially constituted MSB – I.T. division to process.

The provisions described above clearly demonstrates that a shift has taken place in urban developments pertaining I.T. industry and the urban development policies started coping up with the economic agenda leading to adoption of innovative and market friendly approaches in attracting investments in the I.T. industry.

ANALYSIS OF I.T. PARKS FOR WHICH N.O.C IS GRANTED BY ELCOT

ELCOT has granted NOC for 192 I.T. buildings with a total plinth area of 7.03 million Sq.m from 2003-08 in Tamil Nadu. Area wise break up of I.T. parks is given in the Table A below:

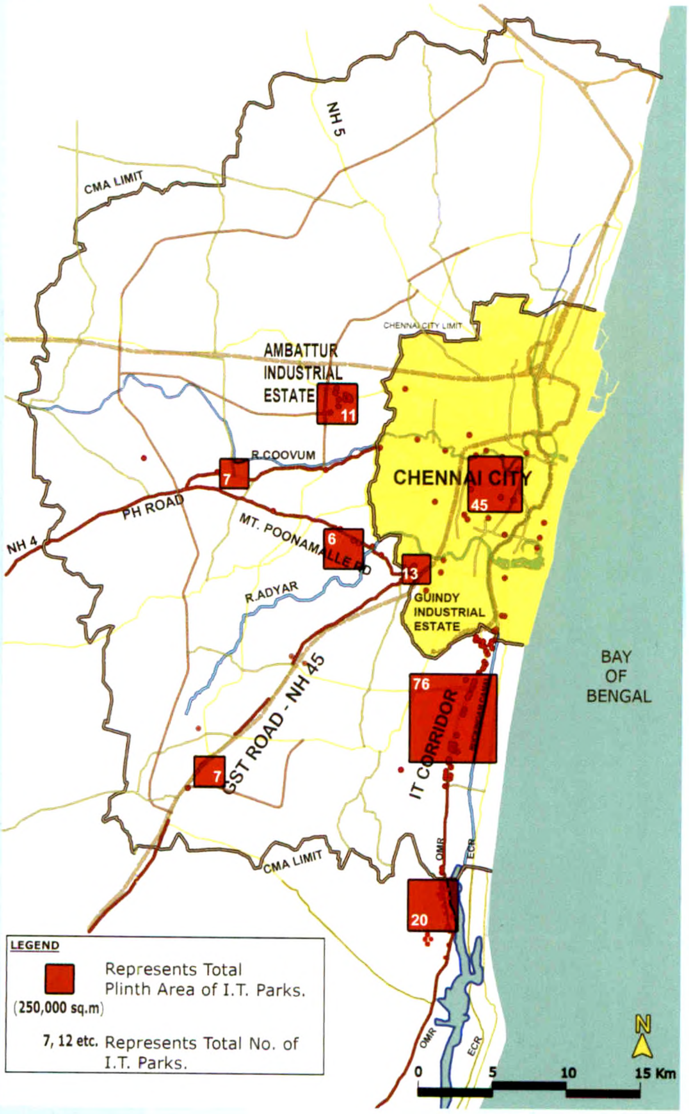
Table A: Area wise break up of I.T. parks for which NOC has been issued by ELCOT

Sl. No.	Locations of I.T. parks	No of I.T. parks	Total Area in Sq.m.	%
1	Chennai city	45	947,067	13.46
2	Guindy industrial estate	13	273,360	3.89
3	Along I.T. Corridor (within CMAlimit)	51	1,322,690	18.80
4	off I.T. corridor (within CMA limit)	25	1,489,510	21.18
5	Along Old Mahabalipuram Road (outside CMA limit)	20	868,816	12.35
6	Off OMR beyond CMA	1	9,061	0.13

Sl. No.	Locations of I.T. parks	No.of I.T. parks	Total Area in Sq.m.	%
7	Ambattur Industrial Estate	11	492,723	7.01
8	Along Mt.Poonamalee road	7	556, 478	7.91
9	Along Grand Southern Trunk. road	7	531,243	7.55
10	Mahindra City	1	44,675	0.64
11	Along P.H. road and others	6	196,998	2.80
12	In Tier II cities	5	301,186	4.28
	GRAND TOTAL	**192**	**7,033,807**	**100.00**

Source: Compiled from Data by CMDA

Out of the total 192 I.T. parks proposed in the entire state, 187 I.T. buildings with a total plinth area of 6.73 million Sqm. are proposed in and around Chennai Metropolis, constituting nearly 96 % of the total development. It is further observed that 58 I.T. parks with 1.22 million Sqm, constituting nearly 17 % of the total development in the state are located within Chennai city. Among the peripheral areas it is observed that nearly 96 I.T. parks with nearly 3.69 million Sqm, constituting 52 % of the total development in the state are located in the I.T. corridor along Old Mahabalipuram Road and its surrounding region both within CMA and outside CMA. The other locations where I.T related developments are observed are Ambattur Industrial Estate, along Mt. Poonamallee road and along Grand Southern Trunk road. In these three locations put together, 25 I.T. parks are proposed with a total plinth area of 1.58 million Sqm constituting 22 % of the total development in the state.



Map 1: Distribution of I.T. parks in Chennai Metropolitan Area

Developments along the I.T. corridor

The I.T. corridor of Chennai (from Madhya Kailash, in Chennai City to the CMA boundary) is designated as an area of special character. It traverses through 6 villages and the developments have been triggered by the 6 lane I.T. Express way and the presence of many I.T. Parks. The land use relaxation and the FSI benefits granted for I.T. buildings have been the attraction for many private developers to undertake construction of I.T. parks. Beyond the CMA limit also I.T. parks are proposed as there is a proposal to extend the I.T. Expressway up to Mahabalipuram.

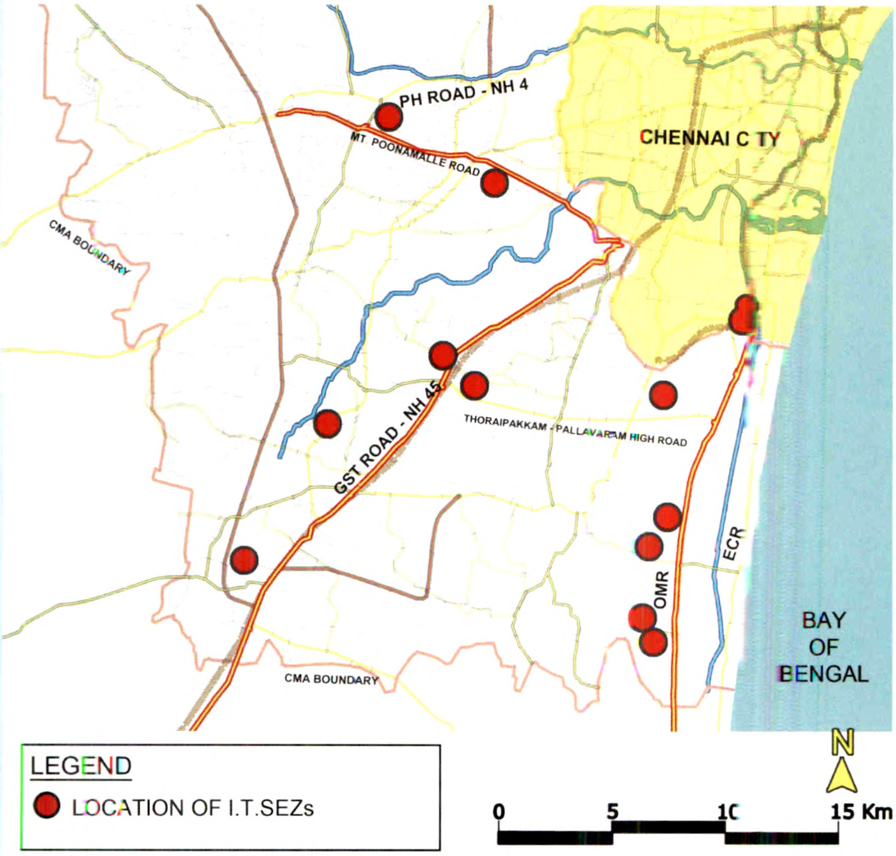
IT-SEZs - a new form of urban development

The I.T. SEZs which are of recent origin since 2006 are yet another development related to I.T. industry in Tamil Nadu which is bound to have a large impact on urban development. I.T. SEZs requires a minimum extent of 10 hectares (25 acres) of land. Of the total 22 I.T. SEZs notified in Tamil Nadu, 18 are proposed in Chennai Metropolis and its surrounding region with 471 Hectares or 1163 acres of land under consideration. Of these, the I.T. corridor accounts for the 6, followed by 4 in G.S.T road and 2 in Mt. Poonamallee road.

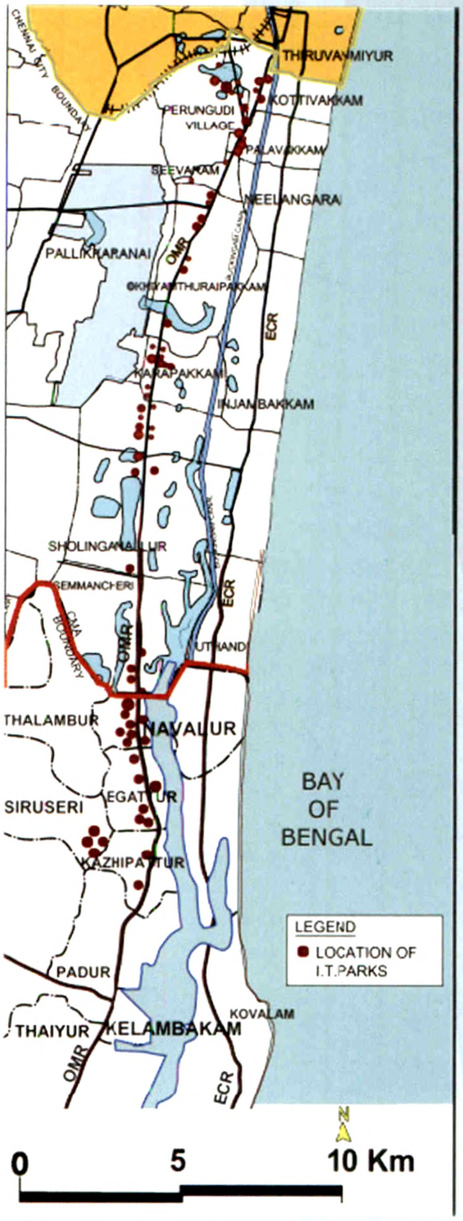
CONCLUSION

It is observed that the I.T. policy of Tamil Nadu has had a direct bearing on the urban development policy. Despite the efforts of the government to distribute I.T. related activities to tier II and tier III cities of Tamil Nadu, the I.T. industry's concentration has been felt mostly in Chennai Metropolitan Area only.

The changes made to the development control rules of CMDA, particularly with regard to the land use relaxation and FSI as a consequence of the I.T. policy and the sops given for speedy clearance has resulted in many I.T. related developments in Chennai Metropolitan Area.



Map 3: Location of I.T. SEZs proposed in CMA



Map 2: Distribution of I.T. Parks around I.T. corridor

The manifestation of I.T. parks for which NOC has been signed by ELCOT is felt both within the core city and peripheral areas. The delineation of I.T. corridor along the Old Mahabalipuram Road and 6 lane I.T. Expressway have resulted in concentration of I.T. related activities accounting for more than 50 % of the total development in the state.

The transformation of the Guindy and Ambattur Industrial Estates have also been largely due to the I.T. policy which has laid emphasis on utilisation of infrastructure available at industrial estate for I.T. related developments.

It is observed that the urban development policy has translated the I.T. policy and in order to give thrust to I.T. industry many exceptions have been made. However the planning mechanism has responded mostly towards creation of work space for I.T. related activities and the need for other built form for the I.T. work force has not been adequately addressed. The fact that I.T. industry has provided direct employment to 2.7 lakhs of knowledge workers in 2006-07 creates the need for other built forms such as residential, commercial and social infrastructure. These are the cascading effects of the I.T. industry and presently they are met entirely by the private sector. As per a study carried out by CMDA on I.T. corridor in 2003, the demand for housing was estimated at 1.56 lakhs of dwelling units by 2006. But the supply is far less. The latest I.C.T. policy 2008 recognises the need for satellite towns, master plan, provision for housing and social infrastructure but the thrust is more on private initiative.

The I.T. policy which is in favour of making Tamil Nadu a destination has obviously influenced the urban development policy of CMDA. The sops given for developments relating to I.T. related activities particularly for work environment has encouraged disproportionate developments mostly through the initiative of private developers. In the absence of a comprehensive proposal for accommodating the I.T. industry, the developments are entirely market driven. If the objective of the government is to attract investments in Tier II and Tier III cities in order to bring a balanced growth of the industry, throughout the state, an integrated approach is required.

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> *Your altitude is determined by your attitude.*
>
> — *Anonymous*

Kurukshetra-The Battle of Brains

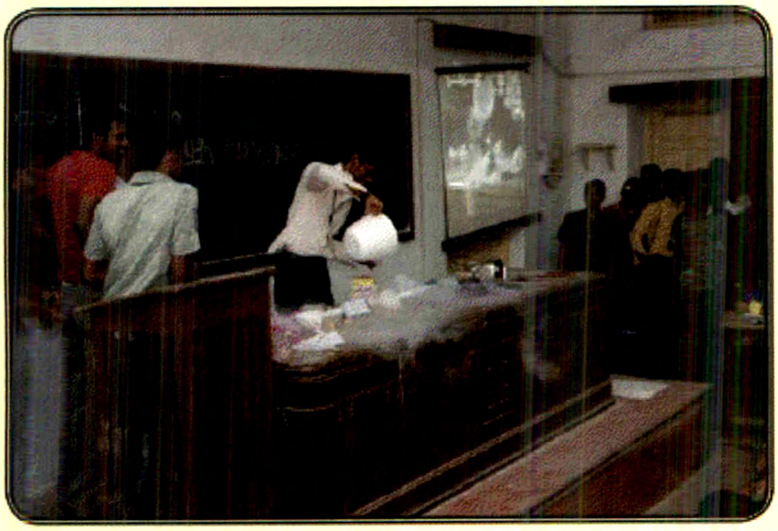
Kurukshetra, the International Techno-Management Festival of College of Engineering, Guindy, Anna University Chennai, is underway, surpassing its predecessor beyond everyone's wildest dreams. This phenomenal event, covering a myriad of technical and management contests, along with workshops and guest lectures by eminent personalities, is sure to be a grand success once more, with more than 350 colleges participating from all over the country in more than 30 spectacular events. Also, Kurukshetra has the distinction of being the only student organization in the country to be under UNESCO patronage.

Vice Chancellor Prof. Dr. P. Mannar Jawahar addressing at Inauguration of K! 09

Kurukshetra is packed with a number of intriguing events which test participants' skills and showcase their talents in front of some of the brightest brains of the country. With competitions covering areas such as racing, aeromodelling, robotics, programming, management and quizzes, there is something for everybody here. The online events witness participants from all over the world.

Projects form an integral part of Kurukshetra. Developed on various topics by students, they act as an important platform to showcase latest technological developments and increase awareness. They are also an important link to forge strong industrial connections and help students gain hands-on experience.

To add extra flavor to the fierce battle of brains, Kurukshetra also features some truly fascinating exhibitions to enhance the knowledge of one and all. These are aimed at reaching out, not only to the avid student or professional, but also to the common man.



Students performing fun with physics - an event at K! 09

Visit the official site www.kurukshetra.org.in for more details. Kurukshetra is all set to redefine the true spirit of engineering and make waves once more. Join us this time too and be a part of the battle.

CALCUTTA

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Vice-Chancellor Speaks....

In the globalized world, knowledge, skills and expertise have to be not only acquired but also shared. As the multifaceted American leader Benjamin Franklin observed, "An investment in knowledge always pays the best interest." We are happy that our efforts to develop the knowledge, skills and expertise of our students have paid rich dividends.

Our students have been receiving international recognition for their innovative ventures. To mention a few: Mr. Sakthivel, a third year student of automobile engineering from MIT Campus, participated and presented a technical paper in the Challenge Bibendum 2011 in Berlin, Germany, at the invitation of M/s. Michelin India Tyres. A team of five final year students from the Departments of Electronics and Communication Engineering, Production Technology, and Aerospace Engineering participated in a competition in the field of Robotics in January 2010. They were invited to visit the Lockheed Martin Centre for Innovation, Suffolk, Virginia, USA from 13th to 17th June 2011.

The Centre for Biotechnology celebrated the Silver Jubilee this year. It is heartening to note that the centre has evolved over the past 25 years into a major research hub for biotechnology. It deserves our felicitations and wishes for greater success in future research and innovations.

We are also proud of the ANUSAT team of Anna University. The Micro-satellite they built and sent into space on 20th April 2009 has successfully completed two years of its mission. It has so far completed around 10650 orbits around the earth covering a distance of 45 million kilometers.

Recently, the Government of Tamil Nadu has announced that all engineering colleges in Tamil Nadu will come under the roof of Anna University, Chennai, for affiliation. In this context, our academic and administrative responsibility is manifold. With our past experience as an affiliating university, we will surely fulfill the aspirations of the people.

(Dr. P. Mannar Jawahar)
Vice Chancellor

VICE-CHANCELLOR Prof. Dr. P. MANNAR JAWAHAR's PROGRAMME DURING APRIL - JUNE 2011

Felicitating the Task Team Members of Anusat, Anna University on the occasion of successful completion of Anusat's two year 'in orbit' mission life.

Distributing the CTS Foundation Scholarships to 12 students of Rs.35,000/- each belonging to Computer Science and Information Technology Departments of CEG and MIT campuses on 20th April 2011.

Presenting Certificates to Best Campus Ambassadors of CEG, ACTech & MIT campuses on 20th April 2011.

VICE-CHANCELLOR Prof. Dr. P. MANNAR JAWAHAR's PROGRAMME DURING APRIL - JUNE 2011

Presenting Certificates to the Best Campus Ambassadors of CEG, ACTech & MIT campuses on 20th April 2011.

Inaugurating the One-day Round Table Workshop on "Thrust Areas for R&D in Glass Ceramic Technology" at Raman Auditorium, ACTech on 25th April 2011.

Honouring the delegates of the 12th batch of Six Sigma Green Belt Program at AU-TVS CQM on 26th April 2011.

VICE-CHANCELLOR Prof. Dr. P. MANNAR JAWAHAR's PROGRAMME DURING APRIL - JUNE 2011

Welcoming Prof. Ing Michele Antonio Trovato, Professor of Electrical Energy Systems, and the delegation from Politecnico Di Bari, Italy on 3rd May 2011.

Welcoming Mr. Pierre Fournier, Consul General, French Consulate in Pondicherry and discussing collaboration between Anna University, Chennai and Universities in France on 19th May 2011.

Participating in the Silver Jubilee Celebrations of the Centre for Biotechnology, Anna University, Chennai on 19th May 2011.

VICE-CHANCELLOR Prof. Dr. P. MANNAR JAWAHAR's PROGRAMME DURING APRIL - JUNE 2011

Participating in a discussion with Chinese delegates and TCS Executives on 1st June 2011.

Distributing certificates to the children who attended "An Exhibition of Products by Children of Staff, Anna University" organized in connection with the "Day Care Centre Summer Camp 2011" by Centre for Empowerment of Women and Day Care Centre on 3rd June 2011.

Welcoming Mr.David Holly, Australian Consul General and the delegation from Australia on 7th June 2011.

VICE-CHANCELLOR Prof. Dr. P. MANNAR JAWAHAR's PROGRAMME DURING APRIL - JUNE 2011

Inaugurating a "One-day Workshop to Ensure Fishworkers Participation in Implementation of CRZ 2011" conducted by Institute of Ocean Management, Anna University, Chennai, in association with Society of Integrated Coastal Management (SICOM), National Centre for Sustained Coastal Management (NCSCM) and Ministry of Environment and Forests, Government of India on 13th June 2011.

Faculty Development Tr... Programme on
Applied Hydraulics ... Pneumatics
Plastics Pro...

Inaugurating an FDP on "Applied Hydraulics & Pneumatics (ME2305) & Plastic Processing Technology (PL 2305)" at MIT Campus on 13th June 2011.

ANNA UNIVERSITY
MADRAS INSTITUTE OF TECHNOLOGY
Department of Information Technology

Inaugurating an International Conference on "Recent Trends in Information Technology – ICRTIT 2011" on 3rd June 2011 at MIT Campus.

UNIVERSITY DEPARTMENTS / CENTRES

SPONSORED PROJECTS

Name of the Co-ordinator	Project Title	Funding Agency	Amount Sanctioned (Rs. in lakh)

DEPARTMENT OF CIVIL ENGINEERING

Dr. K. Gunasekaran	Improving Transit System Performance Through Automatic Data Collection Systems	IITM	12.00
Dr. K. Gunasekaran	Study on Safety of Work Zone in Urban Areas in a Semiarid Region of India	IITM	12.75

DEPARTMENT OF ELECTRONICS & COMMUNICATION ENGINEERING

Dr. R. Seshasayanan	Acoustic Image processing through Beam Forming	NIOT	17.25
Dr. R. Seshasayanan	Feasibility Exploration of Multibus Architecture for AFC Applications	CVRDE-CARS	19.78

DEPARTMENT OF INFORMATION SCIENCE AND TECHNOLOGY

Dr. Ranjani Parthasarathi	Development of Cross Lingual Information Access (CLIA) System Phase II	DIT	138.17

DEPARTMENT OF PHYSICS

Dr. R. Gopalakrishnan	Synthesis, Growth and Characterization of Picrate Family Crystal and Growth of Potassium Sodium Tartrate Tetrahydrate Single Crystal from Conventional Solution Growth and Unidirectional Method of Sankaranarayanan - Ramasamy for Technological Applications	CSIR	16.71
Dr. K. Sivakumar	Supramolecular Framework Studies in Dihydrogen Phosphate Salts for Catalytic and Storage Applications	UGC	6.983
Dr. R. Murugaraj	Experimental Investigations on Electrical Relaxation Process in Solid State Ionic Materials	UGC	5.718

DEPARTMENT OF CHEMISTRY

Dr. N. Rajendran	Preparation and Characterization of Ceramic Nanocontainers for Biomedical Applications	DST	11.29

DEPARTMENT OF TEXTILE TECHNOLOGY

Dr. N. Gopi	Development of Nano Composite Mask for NBC Protective Applications	BRNS	15.80
Dr. R. Neelakandan	Novel Biodegradable Fibers for Controlled Drug Release by Low Voltage Electrical Stimulation	BRNS	10.40

CENTRE FOR BIOTECHNOLOGY

Dr. J. Tamilselvan	Autophagy Influences Hyperglycemia / Hyperinsulinemia Induced Adipocyte Dysfunction : A Possible of Insulin Resistance	DBT	32.17
Dr. R.B. Narayanan	Recombinant BM-33 (Brugia Malayi Pepsin Inhibitor Homolog) Induced Modulation of Human Macrophage Functions in Vitro	CSIR	28.98

Name of the Co-ordinator	Project Title	Funding Agency	Amount Sanctioned (Rs. in lakh)

CENTRE FOR MEDICAL ELECTRONICS

Dr. S. Shenbaga Devi	Functional Electrical Stimulation in Hemiplegics for Functional Restoration of Upper Limb using EEG based Brain Computer Interface	LSRB	19.60

DEPARTMENT OF INSTRUMENTATION ENGINEERING

Dr. L. Prakash	Nonlinear State Estimation for Target Missile	DRDL-CARS	9.69

AU-KBC RESEARCH CENTRE

Dr. Suvro Chatterjee	Study of Nitric Oxide Implications in Cardiovascular Dysfunctions under Microgravity	ISRO	12.05
Dr. Suvro Chatterjee	Proteome Study of the Cadmium Perturbations in Nitric Oxide Signalling	BRNS-DAE	20.93
Dr. Suvro Chatterjee	Development of Chick Embryo Model of Ischemia	ICMR	14.76
Dr. Suvro Chatterjee	Targeting Organosulphur as a Drug High Altitude Induced Pulmonary Edema	LSRB	23.72

PATENT GRANTED

Patent No.	Title of the Patent	Date	Inventors

CENTRE FOR INTELLECTUAL PROPERTY RIGHTS

US Patent No. 7920599	"Methods and Systems for Synchronizing Wireless Transmissions of Data Packets"	05.04.2011	Mr. Srikanth Subramanian & Mr. Sathish Viswanathan of AU-KBC Centre, MIT, Anna University, Chennai

Centre for Crystal Growth, Anna University, is organizing an Asia-Pacific workshop on 'Characterisation of Materials' from 22nd to 24th September 2011. Last date for Registration: 26th August 2011.

Tamilnadu State Council for Science and Technology invites project proposals from final year UG (Engineering)/ PG students (science) /PG students of Agriculture, Medicine and Veterinary Science under Student Projects Scheme (SPS). For further details visit http://www.tanscst.org/pdf/sps.pdf

CONFERENCES / WORKSHOPS / LECTURES / SYMPOSIUM / TRAINING PROGRAMMES / SEMINARS / EXHIBITIONS / CULTURALS ORGANIZED

Date	Programme	Organized by	Dignitaries
APRIL 2011			
05.04.11	HOSBLISS' 11	**The Dean, Executive Warden, The Members of the Hostel Council and Residents of the A.C. Tech Hostels,** Anna University, Chennai	*Chief Guest :* Prof. Dr. P. Mannar Jawahar Vice-Chancellor, Anna University, Chennai
MAY 2011			
11.05.11	The Technology Day Celebration	**Centre for Technology Development and Transfer,** Anna University, Chennai	*Presidential Address :* Prof. Dr. P. Mannar Jawahar, Vice-Chancellor, Anna University, Chennai
JUNE 2011			
06.06.11	World Environmental Day 2011	**Centre for Environmental Studies** and **Department of Civil Engineering,** CEG, Anna University	*Keynote Address :* Dr. R.K. Elangovan, Director (Safety) Regional Labour Institute, Adyar
13.06.11	Workshop to Ensure Fishworkers Participation in Implementation of CRZ 2011	**Anna University, Chennai** Society of Integrated Coastal Management, National Centre for Sustainable Coastal Management and Ministry of Environment and Forests, Government of India	*Keynote Address :* Mr. Gagandeep Singh Bedi, IAS Secretary, Animal Husbandry, Dairying and Fisheries Department, Government of Tamil Nadu
22.06.11	Indo-German Workshop on "Recent Developments in Large Scale Solar Thermal Systems for Commercial Applications and Green Buildings"	**AU-FRG, ICC & IES, Anna University, Chennai** in Association with GERINDTEC & GIZ, Germany & Tamil Nadu Energy Development Agency (TEDA)	*Inaugural Address :* Dr. R. Christodas Gandhi, IAS Chairman & MD, TEDA
22.06.11	Inauguration of "Marutham Hostel - Phase II" at MIT Campus	**Anna University, Chennai**	*Inaugurated by :* Prof. Dr. P. Mannar Jawahar Vice-Chancellor, Anna University, Chennai
24.06.11 & 25.06.11	International Workshop on "e-Learning for Engineering Educators"	**Department of Computer Technology & Centre for Advanced Computing Research and Education, Anna University, Chennai** in collaboration with University of Manitoba, Canada	*Inaugurated by :* Prof. Dr. P. Mannar Jawahar, Vice-Chancellor, Anna University, Chennai
27.06.11	Inauguration of "National Hub for Healthcare Instrumentation Development" (NHHID)	**Anna University, Chennai** & Department of Science and Technology, Govt. of India, New Delhi	*Inaugurated by :* Dr. T. Ramasami Secretary, DST, New Delhi

PAPERS PRESENTED / PUBLISHED / AWARDS RECEIVED / CONSULTANCY / SHORT TERM COURSES / LECTURES DELIVERED / OTHERS

INSTITUTE FOR OCEAN MANAGEMENT

- **Papers Presented**

Prof. R. Ramesh presented a paper on "An Approach to Integrated Coastal Zone Management" in International Conference at Gujarat sponsored by State Project Management Unit (SPMU), Gujarat on 16.04.2011.

Prof. R. Ramesh presented a paper on "Indian Coastal Cities in the Times of Climate Change: A Chennai Case Study" in International Conference at Kuala Lumpur Convention Centre, Malaysia sponsored by 22nd Pacific Science Congress on 14.06.2011.

- **Papers Published**

Mr. Kakolee Banerjee, Mr. B. Senthilkumar, Ms. R. Purvaja and Prof. R. Ramesh, "Sedimentation and Trace Metal Distribution in Selected Locations of Sunderbans Mangroves Hooghly Estuary, Northeast Coast of India", Environ.Geochem.Health. Dol:10/1007/8 10653-011-9338-0. pp.16, 2011.

- **Consultancy**

Consultancy project on "Chennai Port Trust - Additional Study" worth Rs.4,65,000/- for Chennai Port Trust, Chennai for a period of 6 months.

Consultancy project on "Udankudi Super Thermal Power Station (2 x 800 MW). Marine EIA and EMP studies" worth Rs.9,04,000/- for Udankudi Power Corporation Ltd., TNEB for a period of 6 months.

- **Organised**

As part of the 8th Indo-Dutch Initiative, a 3-week course on "Issues of Leadership in Coromandel Coast" was organized from 4th to 22nd April 2011.

DEPARTMENT OF PRINTING TECHNOLOGY

- **Papers Presented**

The following papers were presented in National Conference on "Innovations in Mechanical Engineering - NCIME" on 26.03.2011 :

Mr. T. Thendral Thiyaku and Ms. N.Rajeswari, "Plastic Package Waste Management"

Ms. P. Asha and Mr. K.Senthil Vadivu, "Effect of Gamma Radiation on Flexible Food Packaging Material"

Mr. J. Sandeep and Mr. K.Senthil Vadivu, "Effect of Diameter on the Openability of Threaded Closure"

Mr. M. Gowthaman and Mr. K.Vipinendran, "Design Optimization of a Corrugated Box Used as Secondary Packages for Edible Oil"

Mr. V. Keerthiprasad and Mr. K.Vipinendran, "New Package Development"

Mr. J. Navin and Ms. M.Kanchana, "Design and Shape Optimization of a Corrugated Box used in Packaging of Engine Valves"

Mr. R. Prabhu and Ms. M.Kanchana, "Nano Composites in Food Packaging"

The following papers were presented in National Conference on "Research Trends and Developments in Mechanical Engineering (RTDME 2011)" on 01.04.2011 :

Mr. Binil Emmanuel Chelliah and Ms. N.Rajeswari, "Development of a Cushioning Material from Natural Resource"

Mr. A. Haymik Raja and Mr. B.Kumar, "Blending and Testing of HDPE and R-PET with Glycerol"

- **Papers Published**

Mr. B. Kumar, Ms. Lalitha Jayaraman, Mr. K. Balaji and Mr. K. Krishnan, "Analysis of Consistency of Printing Blankets Using Correlation Techniques", ACTA Graphica, a Journal of Printing Science and Graphic Communication, Vol.21 Issue: 1-2/10 , pp. 43 - 49, 2011.

DEPARTMENT OF ELECTRICAL AND ELECTRONICS ENGINEERING

- **Papers Presented**

The following papers were presented in National Conference on "Electrical Systems & Renewable Energy - NESR'11" conducted by Anna University of Technology at Trichy on April 2011 :

Dr. P. Lakshmi, "Design of Controllers for Quadruple TANK Process" pp 171-174.
Dr. P. Lakshmi, "Optimal Control of Solar Air-conditioning Plant" pp 176-180.
Dr. P. Lakshmi, "Fuzzy Supervisory PID controller for HEAT Exchange Process" pp 322-326.

- **Papers Published**

Ms. P. Vaisali, Ms. S. Usa and Mr. K. Udayakumar, "Importance of Capacitance on Metal Oxide Arrester Block Model for VFTO Applications", IEEE Transactions on Power Delivery, Vol.26, No.2, pp1294-1295, 2011.

DEPARTMENT OF ELECTRONICS AND COMMUNICATION ENGINEERING

- **Papers Published**

Mr. G. Udhayakumar, Ms. C.M. Sujatha and Mr. S. Ramakrishnan, "Analysis of Trabecular Structure in Radiographic Bone Images using Bi-dimensional Empirical Decomposition", American Journal of Biomedical Sciences Instrumentation, ISA, Vol.48, No.47, pp.82-87, 2011.

Ms. S. Sangeetha, Ms. C.M. Sujatha and Mr. S. Ramakrishnan, "Qualitative Femur Bone Tensile Strength Analysis in Radiographic Images using Wavelets", American Journal of Biomedical Sciences Instrumentation, ISA, Vol.48, No.47, pp.129-134, 2011.

Mr. Khalil I. Mahmoud, Ms. J. Dhurga Devi, Mr. R. Rajasekar and Mr. P.V. Ramakrishna, "Studies on Sensitivity of Clock and Data Recovery Circuits to Power Supply Noise", International Journal of Design, Analysis and Tools for Circuits and Systems, Vol.1, No.1, pp.16-21, 2011.

- **Organised**

Dr. K. Murugan and Dr. N. Ramadass organised a Two-week ISTE Workshop on "Basic Electronics" from June 28 to July 8, 2011.

DEPARTMENT OF CHEMISTRY

- **Papers Presented**

Ms. J. Shahitha Parveen, Mr. Swaminathan Elamathi, Ms. Dharmalingam Sangeetha, Ms. Jothinathan Lakshmi, Mr. Subramaninan Mohan Raj, Mr. Subramanian Vasudevan, Mr. D. Jonas Davidson, Mr. Ganapathy Sozhan and Mr. Subbiah Ravichandran presented a paper on "Sulfonated Polystyrene-block-(ethylene-ram-butylene)-block-polystyrene (SPSEBS) Membrane for Water Electrolysis to Generate Hydrogen" in 219th ECS meet at Montreal, Canada from 01.05.2011 to 06.05.2011.

Ms. Dharmalingam Sangeetha and Mr. Ayyaru Sivasankaran presented a paper on "Development of Proton Exchange Membranes for Bio Fuel Cells" in International Congress of Chemistry and Environment (ICCE-5) at Malaysia from 27.05.2011 to 29.05.2011.

- **Organised**

Dr. D. Sangeetha and Dr. K. Subramanian organised a Faculty Development Training Programme on "Engineering Chemistry I (CY2111)"sponsored by Centre for Faculty Development from 14.06.2011 to 21.06.2011.

CENTRE FOR NANOSCIENCE AND TECHNOLOGY

- **Papers Presented**

Dr. T. Devasena presented a paper on "Nephrotoxicity of Diesel Exhaust Particles" in 34th meeting of BRNS, BARC at Mumbai on 17.06.2011.

- **Papers Published**

Ms. N. Sushma and Ms. T. Devasena, "Fenugreek Supplementation Imparts Erythrocyte Resistance to Cypermethrin Induced Oxidative Changed in Vivo", Journal of Complementary and Integrative Medicine, Vol.8 pp.1-14, 2011.

- **Equipment Purchased**

1. Atomic Force Microscope (DST)	- Rs.29,95,392/-
2. Particle Size Analyzer (DST)	- Rs.13,09,120/-
3. UV-Visible Spectrophotometer (DST)	- Rs. 4,75,302/-
4. Thermal Analyzer System (DST)	- Rs.18,76,957/-

CENTRE FOR INTELLECTUAL PROPERTY RIGHTS

- **Patent Granted**

US Patent No.7920599 titled "Methods and Systems for Synchronizing Wireless Transmissions of Data Packets" was granted on 05.04.2011. The inventors are Mr. Srikanth Subramanian and Mr. Sathish Viswanathan of AU-KBC centre, MIT, Anna University, Chennai.

- **Programme Organized**

Conducted a half-a-day program on "World Intellectual Property Day - 2011" at Srinivasa Ramanujan Hall, Department of Mathematics on 26.04.2011.

CENTRE FOR TECHNOLOGY DEVELOPMENT AND TRANSFER

- Possibilities of Research & Innovation Cooperation with Europe - Awareness Raising and Information Campaign in India was organized at Taj Coromandel, Chennai on 20.06.2011.

DEPARTMENT OF AEROSPACE ENGINEERING

- Anusat Task Team of Anna University was felicitated by the Vice-Chancellor on the occasion of the successful completion of Anusat's 2 years 'in orbit' mission. The Anusat, which was launched on 20.04.2009, has so far completed approximately 10,050 orbits around the earth and, in the process has travelled a distance of nearly 45 million kilometers (4.5 Crore Kms).

DEPARTMENT OF INFORMATION TECHNOLOGY

- **Papers Presented**

The following papers were presented in International Conference on "Recent Trends in Information Technology, ICRTIT, 2011" at the Department from 03.06.2011 to 05.06.2011 :

Dr. P. Anandha Kumar and Ms. J. Priyadarshini, "Occlusion Detection and Tracking of Multiple Objects Using Filter Banks"

Dr. P. Anandha Kumar and Ms. J. Priyadarshini, "Indexing and Querying Technique for Dynamic Location Updates using R k-d Trajectory Trie Tree"

Dr. M.R. Sumalatha, "REDD: Redundancy Eliminated Data Dissemination in Cluster Based Sinks"

Dr. M.R. Sumalatha, "Outlier Analysis - Pattern Mining (Oapm) Algorithm in Wireless Sensor Networks"

Dr. M.R. Sumalatha, "Encrypted Data Aggregation in Wireless Sensor Networks using Randomized Routing"

Dr. M.R. Sumalatha and Ms. A. Anusooya Devi, "Modified Diamond-Square Search Technique for Efficient Motion Estimation"

Dr. P. Varalakshmi, "A New Secure Multicast Group Key Management Using Gray Code"

Dr. P. Varalakshmi, "A Mobile Agent Based Approach of Ensuring Trustworthiness in the Cloud"

Dr. K. Dhananjaykumar, "Adaptive Packet Scheduling Algorithm for Real-Time Services in Wi-MAX Networks"

Ms. B. Lydia Elizabeth, "Bayesian Based Confidence Model for Trust Inference in MANET"

DIVISION OF SCIENCE AND HUMANITIES

- **Papers Presented**

  Dr. A. Tamilselvi and Dr. V. Vijayalakshmi presented a paper on “Discrete Mathematics” in Faculty Development Training Programme conducted by Anna University, CEG Campus from 15.06.2011 to 23.06.2011.

- **Papers Published**

  Mr. V. Ramasamy, Mr. G. Suresh, Mr. V. Meenakshisundaram and Mr. V. Ponnusamy, "Horizontal and Vertical Characterization of Radionuclides and Minerals in River Sediments", Applied Radiation and Isotopes, Vol.69, pp.184-195, 2011.

UNIVERSITY SPORTS BOARD

- Sports Day was celebrated on 11.03.2011. Thiru. S.Sarath was the Guest of Honour and distributed the prizes. Prof. Dr. P. Mannar Jawahar, Vice-Chancellor, Anna University presided over the function.
- Annual Sports Award Function was celebrated on 17.03.2011, Thiru. P.Thamaraikannan, IPS, Inspector General of Police (Admin) was the Guest of Honour and distributed the Cash Prizes, Form-III certificates and Zonal / Inter-Zonal Championship trophies. Prof. Dr. P. Mannar Jawahar, Vice-Chancellor, Anna University presided over the function.
- CEG / A.C.TECH / SAP - N.S.O Annual Residential Camp for the year 2010-2011 was conducted at Main Campus from 18.06.2011 to 27.06.2011. 410 Men and 160 Women students actively participated in the camp. Prof. Dr. P. Mannar Jawahar, Vice-Chancellor, Anna University inaugurated the Camp Fire Programme on 26.06.2011.
- College of Engineering teams secured Zonal Championship for the year 2010-2011 organised by Anna University Sports Board.
- Dr.S.Sivanesan, Professor, Chemical Engineering has taken charge as Chairman, Sports Board, Anna University and also Dr.K.Shanthi, Professor, Department of Chemistry has taken charge as Deputy Chairman, Sports Board, Anna University on 01.07.2011.

NATIONAL SERVICE SCHEME CELL

- Sri Balaji Chockalingam Engineering College, Arni conducted a variety of programmes which included Cleaning of Temple and School, Planting of 150 Saplings, Computer Training to School Students, Awareness Programmes on Election, AIDS, Sanitation etc. from 21.03.2011 to 27.03.2011.
- Gojan School of Business and Technology conducted Blood Donation Camp on 25.03.2011. 335 Units of Blood were donated. An awareness programme on Food Waste Management was conducted on 05.04.2011.
- SSN College of Engineering organized a visit to Bala Vihar, a school and home for mentally challenged orphans at Kilpauk, Chennai on 31.03.2011. Yuvasakthi, a Youth Movement in the College organized Tamil competitions for first year students on 06.04.2011.
- NSS Cell, Anna University, Chennai and College of Engineering, Guindy conducted Election Awareness Programme on 06.04.2011 at Kottur, Kotturpuram, Saidapet, Rangarajapuram. 1200 NSS Volunteers participated in this programme.
- Vels Srinivasa College of Engineering & Technology organized an Election Awareness Programme on 09.04.2011.

- Special Camp was conducted in the Villiampakkam Village between 21.06.2011 and 27.06.2011 to create awareness on the following :

  Symptoms of Diabetes, Leprosy, Malaria, Hepatitis, Heart disease, Kidney stone formation, AIDS and Cancer. Cultural programmes on health awareness, importance of female education, ill effects of smoking, religious unity, national integration and prevention of child labour were conducted. Cleaning was done around the Government Middle School. Pencil, pen and eraser were distributed to the students. Special Classes were conducted for the poor students.

YOUTH RED CROSS

- **AC TECH Campus** conducted a 7-Day YRC Camp between 01.06.2011 and 07.06.2011 at the Centre for Rural Development, National Agro Foundation, Illedu Village near Chunambedu, Kancheepuram District. Dr.B.S.Lakshmi, YRC Programme Officer accompanied 35 YRC Volunteers and participated in various activities in and around the Village.

- **CEG Campus** conducted a 7-Day YRC Camp (Unit 1) between 20.06.2011 and 26.06.2011 at Karlapakkam near Thiruninravur. Mr.G.Dhinagaran, YRC Programme Officer accompanied 50 YRC Volunteers and participated in various social service activities in and around the village.

  CEG Campus conducted a 7-Day YRC Camp (Unit 2 & 3) between 20.06.2011 and 26.06.2011 at Sevalaya at Pakkam Village near Thiruninravur. Mr.N.Thangaraj and Mr.K.P.Mani Anand, YRC Programme Officers accompanied 110 YRC Volunteers and participated in various social service activities in and around the village.

  CEG Campus conducted a 7-Day YRC Camp (Unit 4 & 5) between 18.06.2011 and 24.06.2011 at Govt. Hr. Sec. School, Sunnambukulam near Gummidipoondi. Mr.K.Kulothungan, YRC Programme Officer and Mr.D.Narashiman, Teaching Fellow, CEG Campus accompanied 120 YRC Volunteers and participated in various social service activities in and around the village.

- **MIT Campus** conducted a 7-Day YRC Camp (Unit 1, 2 & 3) between 23.06.2011 and 29.06.2011 at Govt. Middle School, Nathanallur near Walajabad, Kancheepuram District. Mr.P.Sadagopan, Dr.S.Thanigaiarasu and Mrs.T.Subashree, YRC Programme Officers accompanied 170 YRC Volunteers and participated in various activities in and around the Village.

- **SAP Campus** conducted a 7-Day YRC Camp between 23.06.2011 and 29.06.2011 at Maivadi Village near Udumalaipettai, Tiruppur District. Mr.S.K.Rajasekaran, YRC Programme Officer accompanied 51 YRC Volunteers and participated in various activities in and around the Village.

Only those who dare to fail greatly can ever achieve greatly.

~ Robert F. Kennedy

I'm a slow walker, but I never walk back..

~ Abraham Lincoln

Ph.D. DEGREE AWARDED

Name of the Candidate	Name of the Supervisor / Joint Supervisor	Date of Oral Exam	Title of the Thesis
FACULTY OF CIVIL ENGINEERING			
Mr. S. Prabu	Dr. S.S. Ramakrishnan	07.01.2011	Integration of GIS and Artificial Neural Networks to Map the Landslide Susceptibility in Nilgiris District
FACULTY OF MECHANICAL ENGINEERING			
Mr. E. Rajasekar	Dr. N. Nedunchezhian	25.01.2011	Experimental and Theoretical Investigation of Oxygenated Biomass Fuelled CI Engine
Mr. N. Shanmuga Sundaram	Dr. N. Murugan Dr. V. Selladurai	28.01.2011	Similar and Dissimilar Friction Stir Welding and Characterization of Aluminium Alloys AA2024-T6 and AA5083-H321
Mr. Paladi Leela Naga Ramesh	Dr. M. Raajenthiren	03.02.2011	A Study on the Hydrodynamics of a Circulating Fluidized Bed using CFD as a Simulation Tool
FACULTY OF INFORMATION AND COMMUNICATION ENGINEERING			
Ms. P. Jayashree	Dr. K.S. Eswaraku	22.12.2010	An Adaptive Multi-tier Cross-Layer Security Framework to Defend against DDoS Attacks in Active Networks
Ms. M. Suganthi	Dr. M. Madheswaran	27.12.2010	Some Investigations on Classification and Analysis of Mammograms for Implementation of Computer-Aided Medical Decision Support System
Ms. R. Sasikala	Dr. K. Duraiswamy	06.01.2011	Dynamic Placement of Proxies in Optimal Locations for Router Assisted Hierarchical Approach and Hierarchical Reliable Multicast Network
Mr. P.S. Periyasamy	Dr. K. Duraiswamy	25.01.2011	A Probabilistic Adaptive Color Reduction Algorithm for Single / Multiple Images With / Without Transparency
FACULTY OF SCIENCE AND HUMANITIES			
Ms. V. Sujatha	Dr. P. Gautham	23.12.2010	Studies on Metal Tolerant Bacteria and Applications of Porphyrin Derivatives
Mr. E. Vetri Murugan	Dr. I. Elango	31.12.2010	Hydrogeochemical Studies and Solute Transport Modelling to Understand the Variation in Groundwater Quality of a Part of Cauvery Delta, India
Ms. R. Vani	Dr. S. Narayana Kalkura	06.01.2011	Investigation on Biomineralization of Urinary Calculi and Synthesis of Nanobiomaterials

FACULTY DEVELOPMENT TRAINING PROGRAMME ON "TECHNICAL ENGLISH I"

A Faculty Development Training Programme (FDTP) on **"Technical English I"** was conducted by the Department of English, Anna University, Chennai from 6th June to 13th June 2011 in the College of Engineering Guindy Campus. The programme was sponsored by the Centre for Faculty Development, Anna University. 20 faculty members working in different engineering colleges attended the programme. **Dr. S. Shanmugavel,** Registrar, Anna University, inaugurated the programme at 9 a.m. on 6th June 2011. In his speech, he laid emphasis on the communication skills of engineering students, and the role of the teachers in improving the language proficiency of the students.

During the seven-day programme, 15 sessions were conducted to make the participants aware of the effective teaching strategies related to 'Technical English I'. The topics dealt with in the sessions were: teaching of grammar, reading strategies, creative thinking and speaking, non-verbal communication, paragraph writing, report writing, teaching vocabulary, effective use of English, letter writing, interpretation of flow charts and bar charts, listening skill, presentation skills, technology in language classes, and study skills. The sessions were handled by resource persons from the Department of English, Anna University and experts from other reputed institutions.

The programme came to a close with the valedictory speech by **Dr. M. Sekar,** the Dean, College of Engineering, Anna University. Before distributing the certificates, he stressed on the importance of the training programme in developing the teaching skills of young faculty members. The programme was co-ordinated by **Dr. S. P. Dhanavel**, Professor and Head, and **Dr. S. S. Soundiraraj,** Associate Professor, Department of English, CEG Campus.

GOVERNMENT AND AFFILIATED COLLEGES

ARUNACHALA COLLEGE OF ENGINEERING

- AICTE sponsored projects
  - * Modernization of Electrical Machine Lab under MODROBS scheme - Total amount received was Rs.8,00,000/- and the approved duration is 1 year from 31.03.2011.
  - * Entrepreneurship Development Cell (EDC) - Total amount received was Rs.5,00,000/- and the approved duration is 2 years from 31.03.2011.
  - * Industry Institute Partnership Cell (IIPC) - Total amount received was Rs.4,00,000/- and the approved duration is 2 years from 31.03.2011.

EASWARI ENGINEERING COLLEGE

- The Department of ECE organised 3rd National Conference on "VLSI, Communication and Networks (VCaN 2011)" on 25.03.2011.
- **Dr. R. Dhanapal** organized Staff Development Program on "Research Trends in Data Mining Technologies", sponsored by AICTE, New Delhi.
- The Department of ECE signed a MOU with Tessolve Services Pvt. Ltd., Bangalore on 05.04.2011.
- The Department of IT organized a Staff Development Programme on "Computational Intelligence" from 18.04.2011 to 30.04.2011, sponsored by AICTE.
- The Department of EEE organized a Two-day National Conference on "Advancements in Power Systems & Power Electronics Engineering" on 20.04.2011, sponsored by AICTE.
- **Mr. Siva Prakasan and Mr. Siva Kumar** presented a paper on "Effect of Change in Properties of Soil by Using Rice Husk Ash and Lime" in National Conference on "Innovations in Mechanical, Mechatronics and Building Sciences (NCIMMBS-2011)" conducted on 29.04.2011 and 30.04.2011.
- **Papers Published**
  - * **Ms. A. Sharmila Dhana Joy and Dr. R. Dhanapal,** "Techniques Developed in Artificial Intelligence from the Standpoint of their Application in Software Engineering", International Journal of Computing, Vol.3, Issue 4, pp. 61-64, 2011.
  - * **Mr. V. Srikanth and Dr. R. Dhanapal,** "A Business Review of E-Retailing in India", International Journal of Business Research and Management (IJBRM), Vol.1, Issue 3, pp. 105-121, 2011.
  - * **Ms. Gayathri and Mrs. Neena Ramesh,** "Power Flow Control in the Grid using Controllable Network Transformer a Smart Device to Improve the System Reliability", International Journal of Current Research, Vol.3, Issue 4, pp. 245-249, 2011.
- The Department of CSE in association with CSI Student Chapter-2011, organized a National Conference on "Innovation in Intelligence and Computing Technologies" on 03.05.2011.
- Department of ECE in association with DRDO, organised a National Seminar on "Acquisition, Processing and Optimization of Real Time Signals, Images and Videos" at the College on 09.05.2011.

EXCEL COLLEGE OF ENGINEERING FOR WOMEN

- AICTE sponsored projects :
  - * Two-Day National Level Seminar on "Electronics System Design and Data Processing" was conducted on 24.06.2011 & 25.06.2011.
  - * Staff Development Programme on "Wireless and Cellular Communication" was conducted from 20.06.2011 to 01.07.2011.
  - * Two-Day National Seminar on "Significance of Information Technology in Digital Computing, Data Storage and High Speed Networks" was conducted on 30.06.2011 & 01.07.2011.

IDHAYA ENGINEERING COLLEGE FOR WOMEN

IDHAYA ENGINEERING COLLEGE FOR WOMEN
6th GRADUATION DAY
Prof. P. DEVADAS MANOHARAN
VERY Rev. Mo. JOHN BRITTO MARY

- Conducted Free Campus Recruitment Drive in association with BTS (Banyan Technology Solutions) on 03.04.2011.
- Celebrated Graduation Day on 15.04.2011. Prof. P. Devadas Manoharan, Vice Chancellor, Anna University of Technology, Trichy was the Chief Guest. Re. Mother John Britto Mary, Superior General, Immaculate Generalate, presided over the function.
- 150 students of B.E and B.Tech (CSE, ECE & IT) participated in an Awareness Programme on AIDS on 14.05.2011.

IDHAYA ENGINEERING COLLEGE FOR WOMEN
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IDHAYA

IFET COLLEGE OF ENGINEERING

- Organised a National Seminar on "Distributed Operating System" at the College on 01.04.2011.
- Celebrated the 13th Annual Day at the college premises on 09.04.2011.
- Conducted 9th Graduation Day at the college premises on 10.04.2011. Dr. S. Gowri, Registrar, Anna University of Technology, Chennai, was the Chief Guest.
- **Mr. D. Senthilnathan** presented a paper on "Some Recent Trends in Spinel (Mg-A1203) and Alum" in IC MEET - 2K11 at Magna Engineering College, Redhills, on 11.04.2011.
- **Mr. P. Baskaran** presented a paper on "Assuring Job Satisfaction Prevents Employee Mobility" in the National Seminar on "Optimising Human Assets" at Srusti Academy of Management, Bhubaneswar on 23.04.2011 and also published the same in ISSN 0974-4274 Vol.4, Issue.4, pp. 27-36, 2011.
- Organized an Orientation programme for first year students on 06.05.2011.

- **Ms. J. Asha** presented a paper on "Secure Data Communication Using Random Bit Substitution" in the International Conference on "Advances in Engineering and Technology 2011 (ICAET - 2011)" at the E.G.S. Pillay Engineering College, Nagapattinam on 27.05.2011 & 28.05.2011. ISBN-978-4507-6433-9 @ 2011.

IFET
COLLEGE OF ENGINEERING
Affiliated to Anna University of Technology Chenn
9th Graduati

K.S.R. COLLEGE OF ENGINEERING

- **Mr. A.V. Balan** delivered a Guest Lecture on "Environmental Engineering & Higher Studies in Abroad" on 28.03.2011.
- **Dr. N. Rangarajan and Mrs. J. Gnanambigai** published a paper on "Energy Optimization in Wireless Sensor Networks Using Sleep Mode Transceiver" in Global Journal of Research in Engineering, Vol.11, No.3, pp.25-29, April 2011.
- **Ms. E. Vani** published a paper on "Applications of Z-Source Inverter & PMSG in Wind Energy Systems", in IJARCS, Vol.2, No.2, pp.427-430, April 2011.
- **Prof. T.K. Kannan & Dr. R. Marappan** presented a paper on "A Study on the Performance of a Single Cylinder Diesel Engine when Fueled with Diethyl Ether Blended Thevetia Peruviana Biodiesel" at "NAMES2011" on 07.04.2011.
- **Mr. M. Ramasamy** delivered a Guest Lecture on "Overview of Digital Signal Processing" at Tagore Institute of Engineering Technology between 06.04.2011 & 07.04.2011.
- **Dr. N. Kanagaraj** organized a two-day National Seminar on "Applications of Intelligent Techniques in the Analysis and Design of Electrical System" (29.04.2011 & 30.04.2011).
- 315 Final year students got placement on the Placement Day on 30.04.2011.
- **Ms. R. Poornima** presented a paper on "A Mutual Authentication Scheme for RFID Reader and Tag" in the Two-day International Conference on "Advances in Engineering and Technology", at E.G.S. Pillay Engineering College, Nagapattinam (27.05.2011 & 28.05.2011).
- **Ms. S. Anguraj** presented a paper on "A Fusion of A-B MAP Cipher and ASET Algorithms for the Enhanced Security and Robustness in Audio Steganography" in the International Conference on "Recent Trends in Information Technology", at Madras Institute of Technology Campus from 03.06.2011 to 05.06.2011.
- **Ms. M. Suguna** published a paper on "Damping of Low Frequency Oscillations using SWAM optimized Controller for SMIB System" in International Conference on "Adaptive Technologies for Sustainable Growth (Icats-2011)" at Pavai Engineering College, Namakkal from 16.06.2011 to 18.06.2011.
- **Dr. G. Singaravel and Mr. A. Mummoorthy** conducted a seminar on "VB.Net" at the college from 20.06.2011 to 22.06.2011.

- **Dr. N. Kanagaraj** presented a Guest Lecture on "Fuzzy logic Control for Special Electrical Drives" in "Self Computing Techniques in Advanced Special Electrical Drives", at Muthyammal Engineering College, Rasipuram on 16.06.2011.
- **Dr. K. Sathiyasekar** presented a paper on "Energy Management" in a seminar at the Institution of Engineers, BHEL, Trichy on 21.06.2011.
- **Ms. R. Poornima** presented a paper on "A Mutual Authentication Scheme for RFID Reader and Tag" in a two-day International Conference on "Advances in Engineering and Technology", at E.G.S. Pillay Engineering College, Nagapattinam conducted on 27.05.2011 and 28.05.2011.
- **Mr. G. Nallakumarasamy, Mr. P.S.S. Srinivasan, Mr. K. Venkatesh Raja and Mr. R. Malayalamurthi** published a paper "Optimization of Operation Sequencing in CAPP using Superhybrid Genetic Algorithms-Simulated Annealing Technique" in ISRN Mechanical Engineering Journal, pp. 7 pages, 2011.

PAVENDAR BHARATHIDASAN COLLEGE OF ENGINEERING & TECHNOLOGY

- A memorandum of understanding was signed between the college and Information & Communication Technology Academy of Tamilnadu (ICTACT) on 06.05.2011.
- Pavendar Bharathidasan College of Engineering and Technology and ICT Academy of Tamilnadu, Chennai jointly organised a Two-day training programe on 'OOPS USING C++' from 20.06.2011 to 21.06.2011. 40 Faculty members from various colleges participated in this programme.

THE RAJAAS ENGINEERING COLLEGE

- A Two-day National Level Conference on 'Communication, VLSI & Signal Processing (NCCVSP-II)" was conducted by the Department of Electronics & Communication Engineering on 07.04.2011 & 08.04.2011.

VIVEKANANDHA INSTITUTE OF ENGINEERING AND TECHNOLOGY FOR WOMEN

- AICTE sponsored 2-week Staff Development Programme on "Visualization of SSS materials" was organised on 16.05.2011 by **Dr. Aiyakutty,** CSIR Emeritus Scientist, School of Physics, Madurai Kamaraj University.

V.R.S. COLLEGE OF ENGINEERING AND TECHNOLOGY

- **Mrs. S. A. Amutha Jeeva Kumar** organised a National Seminar on "Wireless Communication" on 29.04.2011.

ANNA EDUSAT

PROGRAMME SCHEDULE FOR JULY 2011

Date	Stream	Session I 9.00 a.m. - 10.30 a.m.	Session II 11.00 a. m. - 12.30 p. m.
01.07.2011	B.E. Computer Science and Engineering	CS 2402 Mobile & Pervasive Computing (VII Sem) Dr.Bose	CS 2304 System Software (V Sem) Dr.D.Manjula / Ms.Rajeswari Sridhar
04.07.2011	B.E/B.Tech General	———	———
05.07.2011	B.E. Mechanical Engineering	ME 2302 Dynamics of Machinery (V Sem) Dr.G.Shibu	ME 2303 Design of Machine Elements (V Sem) Dr.G.Thanigaiyarasu
06.07.2011	B.E. Electronics and Communication Engineering	EC 2401 Wireless Communication (VII Sem) Dr.M.Meenakshi	EC 2305 Transmission Lines & Waveguides (V Sem) Dr.K.Malathy
07.07.2011	B.E. Electrical and Electronics Engineering	EE 2403 Special Electrical Machines (VII Sem) Dr.A.Kavitha	EE 2303 Transmission & Distribution (V Sem) Dr.P.Valsalal
08.07.2011	B.E. Computer Science and Engineering	CS 2402 Mobile & Pervasive Computing (VII Sem) Dr.Bose	CS 2304 System Software (V Sem) Dr.D.Manjula / Ms.Rajeswari Sridhar
11.07.2011	B.E/B.Tech General	———	———
12.07.2011	B.E. Mechanical Engineering	ME 2302 Dynamics of Machinery (V Sem) Dr.G.Shibu	ME 2303 Design of Machine Elements (V Sem)Dr.G.Thanigaiyarasu
13.07.2011	B.E. Electronics and Communication Engineering	EC 2401 Wireless Communication (VII Sem) Dr.M.Meenakshi	EC 2305 Transmission Lines & Waveguides (V Sem)Dr.K.Malathy
14.07.2011	B.E. Electrical and Electronics Engineering	EE 2403 Special Electrical Machines (VII Sem) Dr.A.Kavitha	EE 2303 Transmission & Distribution (V Sem) Dr.P.Valsalal
15.07.2011	B.E. Computer Science and Engineering	CS 2402 Mobile & Pervasive Computing (VII Sem) Dr.Bose	CS 2304 System Software (V Sem) Dr.D.Manjula / Ms.Rajeswari Sridhar
18.07.2011	B.E/B.Tech General	———	———
19.07.2011	B.E. Mechanical Engineering	ME 2302 Dynamics of Machinery (V Sem)Dr.G.Shibu	ME 2303 Design of Machine Elements (V Sem)Dr.G.Thanigaiyarasu
20.07.2011	B.E. Electronics and Communication Engineering	EC 2401 Wireless Communication (VII Sem) Dr.M.Meenakshi	EC 2305 Transmission Lines & Waveguides (V Sem)Dr.K.Malathy
21.07.2011	B.E. Electrical and Electronics Engineering	EE 2403 Special Electrical Machines (VII Sem) Dr.A.Kavitha	EE 2303 Transmission & Distribution (V Sem) Dr.P.Valsalal
22.07.2011	B.E. Computer Science and Engineering	CS 2402 Mobile & Pervasive Computing (VII Sem) Dr.Bose	CS 2304 System Software (V Sem) Dr.D.Manjula / Ms.Rajeswari Sridhar
25.07.2011	B.E/B.Tech General	———	———
26.07.2011	B.E. Mechanical Engineering	ME 2302 Dynamics of Machinery (V Sem)Dr.G.Shibu	ME 2303 Design of Machine Elements (V Sem)Dr.G.Thanigaiyarasu
27.07.2011	B.E. Electronics and Communication Engineering	EC 2401 Wireless Communication (VII Sem) Dr.M.Meenakshi	EC 2305 Transmission Lines & Waveguides (V Sem)Dr.K.Malathy
28.07.2011	B.E. Electrical and Electronics Engineering	EE 2403 Special Electrical Machines (VII Sem) Dr.A.Kavitha	EE 2303 Transmission & Distribution (V Sem) Dr.P.Valsalal
29.07.2011	B.E. Computer Science and Engineering	CS 2402 Mobile & Pervasive Computing (VII Sem) Dr.Bose	CS 2304 System Software (V Sem) Dr.D.Manjula / Ms.Rajeswari Sridhar

PROGRAMME SCHEDULE FOR AUGUST 2011

01.08.2011	B.E/B.Tech General	———	———
02.08.2011	B.E. Mechanical Engineering	ME 2302 Dynamics of Machinery (V Sem)Dr.G.Shibu	ME 2303 Design of Machine Elements (V Sem) Dr.G.Thanigaiyarasu
03.08.2011	B.E. Electronics and Communication Engineering	EC 2401 Wireless Communication (VII Sem) Dr.M.Meenakshi	EC 2305 Transmission Lines & Waveguides (V Sem) Dr.K.Malathy
04.08.2011	B.E. Electrical and Electronics Engineering	EE 2403 Special Electrical Machines (VII Sem) Dr.A.Kavitha	EE 2303 Transmission & Distribution (V Sem) Dr.P.Valsalal
05.08.2011	B.E. Computer Science and Engineering	CS 2402 Mobile & Pervasive Computing (VII Sem) Dr.Bose	CS 2304 System Software (V Sem) Dr.D.Manjula / Ms.Rajeswari Sridhar

Date	Stream	Session I 9.00 a.m. - 10.30 a.m.	Session II 11.00 a. m. - 12.30 p. m.
08.08.2011	B.E/B.Tech General	———	———
09.08.2011	B.E. Mechanical Engineering	ME 2302 Dynamics of Machinery (V Sem)Dr.G.Shibu	ME 2303 Design of Machine Elements (V Sem)Dr.G.Thanigaiyarasu
10.08.2011	B.E. Electronics and Communication Engineering	EC 2401 Wireless Communication (VII Sem) Dr.M.Meenakshi	EC 2305 Transmission Lines & Waveguides (V Sem)Dr.K.Malathy
11.08.2011	B.E. Electrical and Electronics Engineering	EE 2403 Special Electrical Machines (VII Sem) Dr.A.Kavitha	EE 2303 Transmission & Distribution (V Sem) Dr.P.Valsalal
12.08.2011	B.E. Computer Science and Engineering	CS 2402 Mobile & Pervasive Computing (VII Sem) Dr.Bose	CS 2304 System Software (V Sem) Dr.D.Manjula / Ms.Rajeswari Sridhar
16.08.2011	B.E. Mechanical Engineering	ME 2302 Dynamics of Machinery (V Sem)Dr.G.Shibu	ME 2303 Design of Machine Elements (V Sem)Dr.G.Thanigaiyarasu
17.08.2011	B.E. Electronics and Communication Engineering	EC 2401 Wireless Communication (VII Sem) Dr.M.Meenakshi	EC 2305 Transmission Lines & Waveguides (V Sem) Dr.K.Malathy
18.08.2011	B.E. Electrical and Electronics Engineering	EE 2403 Special Electrical Machines (VII Sem) Dr.A.Kavitha	EE 2303 Transmission & Distribution (V Sem) Dr.P.Valsalal
19.08.2011	B.E. Computer Science and Engineering	CS 2402 Mobile & Pervasive Computing (VII Sem) Dr.Bose	CS 2304 System Software (V Sem) Dr.D.Manjula / Ms.Rajeswari Sridhar
22.08.2011	B.E/B.Tech General	———	———
23.08.2011	B.E. Mechanical Engineering	ME 2302 Dynamics of Machinery (V Sem)Dr.G.Shibu	ME 2303 Design of Machine Elements (V Sem)Dr.G.Thanigaiyarasu
24.08.2011	B.E. Electronics and Communication Engineering	EC 2401 Wireless Communication (VII Sem) Dr.M.Meenakshi	EC 2305 Transmission Lines & Waveguides (V Sem)Dr.K.Malathy
25.08.2011	B.E. Electrical and Electronics Engineering	EE 2403 Special Electrical Machines (VII Sem) Dr.A.Kavitha	EE 2303 Transmission & Distribution (V Sem) Dr.P.Valsalal
26.08.2011	B.E. Computer Science and Engineering	CS 2402 Mobile & Pervasive Computing (VII Sem) Dr.Bose	CS 2304 System Software (V Sem) Dr.D.Manjula / Ms.Rajeswari Sridhar
29.08.2011	B.E/B.Tech General	———	———
30.08.2011	B.E. Mechanical Engineering	ME 2302 Dynamics of Machinery (V Sem)Dr.G.Shibu	ME 2303 Design of Machine Elements (V Sem)Dr.G.Thanigaiyarasu
PROGRAMME SCHEDULE FOR SEPTEMBER 2011			
02.09.2011	B.E. Computer Science and Engineering	CS 2402 Mobile & Pervasive Computing (VII Sem) Dr.Bose	CS 2304 System Software (V Sem) Dr.D.Manjula / Ms.Rajeswari Sridhar
05.09.2011	B.E/B.Tech General	Engineering Graphics (I sem) Dr.Velamurali	Mathematics – I (I sem) Dr.T.N.Shanmugam
06.09.2011	B.E. Mechanical Engineering	ME 2302 Dynamics of Machinery (V Sem)Dr.G.Shibu	ME 2303 Design of Machine Elements (V Sem)Dr.G.Thanigaiyarasu
07.09.2011	B.E. Electronics and Communication Engineering	EC 2401 Wireless Communication (VII Sem) Dr.M.Meenakshi	EC 2305 Transmission Lines & Waveguides (V Sem)Dr.K.Malathy
08.09.2011	B.E. Electrical and Electronics Engineering	EE 2403 Special Electrical Machines (VII Sem) Dr.A.Kavitha	EE 2303 Transmission & Distribution (V Sem) Dr.P.Valsalal
09.09.2011	B.E. Computer Science and Engineering	CS 2402 Mobile & Pervasive Computing (VII Sem) Dr.Bose	CS 2304 System Software (V Sem) Dr.D.Manjula / Ms.Rajeswari Sridhar
12.09.2011	B.E/B.Tech General	Engineering Graphics (I sem) Dr.Velamurali	Mathematics – I (I sem) Dr.T.N.Shanmugam
13.09.2011	B.E. Mechanical Engineering	ME 2302 Dynamics of Machinery (V Sem)Dr.G.Shibu	ME 2303 Design of Machine Elements (V Sem) Dr.G.Thanigaiyarasu
14.09.2011	B.E. Electronics and Communication Engineering	EC 2401 Wireless Communication (VII Sem) Dr.M.Meenakshi	EC 2305 Transmission Lines & Waveguides (V Sem) Dr.K.Malathy
15.09.2011	B.E. Electrical and Electronics Engineering	EE 2403 Special Electrical Machines (VII Sem) Dr.A.Kavitha	EE 2303 Transmission & Distribution (V Sem) Dr.P.Valsalal
16.09.2011	B.E. Computer Science and Engineering	CS 2402 Mobile & Pervasive Computing (VII Sem) Dr.Bose	CS 2304 System Software (V Sem) Dr.D.Manjula / Ms.Rajeswari Sridhar

Date	**Stream**	**Session I** **9.00 a.m. - 10.30 a.m.**	**Session II** **11.00 a. m. - 12.30 p. m.**
19.09.2011	B.E/B.Tech General	Engineering Graphics (I sem) Dr.Velamurali	Mathematics – I (I sem) Dr.T.N.Shanmugam
20.09.2011	B.E. Mechanical Engineering	ME 2302 Dynamics of Machinery (V Sem)Dr.G.Shibu	ME 2303 Design of Machine Elements (V Sem)Dr.G.Thanigaiyarasu
21.09.2011	B.E. Electronics and Communication Engineering	EC 2401 Wireless Communication (VII Sem) Dr.M.Meenakshi	EC 2305 Transmission Lines & Waveguides (V Sem)Dr.K.Malathy
22.09.2011	B.E. Electrical and Electronics Engineering	EE 2403 Special Electrical Machines (VII Sem) Dr.A.Kavitha	EE 2303 Transmission & Distribution (V Sem) Dr.P.Valsalal
23.09.2011	B.E. Computer Science and Engineering	CS 2402 Mobile & Pervasive Computing (VII Sem) Dr.Bose	CS 2304 System Software (V Sem) Dr.D.Manjula / Ms.Rajeswari Sridhar
26.09.2011	B.E/B.Tech General	Engineering Graphics (I sem) Dr.Velamurali	Mathematics – I (I sem) Dr.T.N.Shanmugam
27.09.2011	B.E. Mechanical Engineering	ME 2302 Dynamics of Machinery (V Sem)Dr.G.Shibu	ME 2303 Design of Machine Elements (V Sem)Dr.G.Thanigaiyarasu
28.09.2011	B.E. Electronics and Communication Engineering	EC 2401 Wireless Communication (VII Sem) Dr.M.Meenakshi	EC 2305 Transmission Lines & Waveguides (V Sem)Dr.K.Malathy
29.09.2011	B.E. Electrical and Electronics Engineering	EE 2403 Special Electrical Machines (VII Sem) Dr.A.Kavitha	EE 2303 Transmission & Distribution (V Sem) Dr.P.Valsalal
30.09.2011	B.E. Computer Science and Engineering	CS 2402 Mobile & Pervasive Computing (VII Sem) Dr.Bose	CS 2304 System Software (V Sem) Dr.D.Manjula / Ms.Rajeswari Sridhar

PROGRAMME SCHEDULE FOR OCTOBER 2011

03.10.2011	B.E/B.Tech General	Engineering Graphics (I sem) Dr.Velamurali	Mathematics – I (I sem)Dr.T.N.Shanmugam
10.10.2011	B.E/B.Tech General	Engineering Graphics (I sem)Dr.Velamurali	Mathematics – I (I sem) Dr.T.N.Shanmugam
17.10.2011	B.E/B.Tech General	Engineering Graphics (I sem)Dr.Velamurali	Mathematics – I (I sem)Dr.T.N.Shanmugam
24.10.2011	B.E/B.Tech General	Engineering Graphics (I sem)Dr.Velamurali	Mathematics – I (I sem)Dr.T.N.Shanmugam
31.10.2011	B.E/B.Tech General	Engineering Graphics (I sem)Dr.Velamurali	Mathematics – I (I sem)Dr.T.N.Shanmugam

PROGRAMME SCHEDULE FOR NOVEMBER 2011

14.11.2011	B.E/B.Tech General	Engineering Graphics (I sem)Dr.Velamurali	Mathematics – I (I sem) Dr.T.N.Shanmugam
21.11.2011	B.E/B.Tech General	Engineering Graphics (I sem)Dr.Velamurali	Mathematics – I (I sem) Dr.T.N.Shanmugam
28.11.2011	B.E/B.Tech General	Engineering Graphics (I sem)Dr.Velamurali	Mathematics – I (I sem) Dr.T.N.Shanmugam

Cut off your fear!

Once there was a king who received a gift of two magnificent falcons from Arabia. They were peregrine falcons, the most beautiful birds he had ever seen. He gave the precious birds to his head falconer to be trained by him.

Months passed and one day the head falconer informed the king that though one of the falcons was flying majestically, soaring high in the sky, the other bird had not moved from its branch since the day it had arrived.

The king summoned healers and sorcerers from all the land to tend to the falcon, but no one could make the bird fly. He presented the task to the member of his court, but the next day, the king saw through the palace window that the bird had still not moved from its perch. Having tried everything else, the king thought to himself, "May be I need someone more familiar with the countryside to understand the nature of this problem." So he cried out to his court, "Go and get a farmer."

In the morning, the king was thrilled to see the falcon soaring high above the palace gardens. He said to his court, "Bring me the doer of this miracle." The court quickly located the farmer, who came and stood before the king. The king asked him, "How did you make the falcon fly?"

With his head bowed, the farmer said to the king, "It was very easy, your highness. I simply cut the branch where the bird was sitting."

We are all made to fly.... to realize our incredible potential as human beings. But instead of doing that, we sit on our branches, clinging to the things that are familiar to us. The possibilities are endless, but for most of us, they remain undiscovered. We conform to the familiar, the comfortable, and the mundane. So for the most part, our lives are mediocre instead of exciting, thrilling and fulfilling.

So let us learn to destroy the branch of fear we cling to and free ourselves to the glory of flight.

Source : **Internet**

Prof.Dr.P.Mannar Jawahar, Vice-Chancellor, Anna University, Chennai, distributed certificates to the residents of the A.C. Tech Hostels, Anna University, Chennai in "HOSBLISS' 11" on 5th April 2011.

Prof.Dr.P.Mannar Jawahar, Vice-Chancellor, Anna University, Chennai, honoured the faculty and staff members who retired in May 2011.

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ANNA UNIVERSITY

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Volume 6 Issue 3

10/2/12

News Bulletin

July - September 2011

CALCUTTA UNIVERSITY

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Assistant Professor,
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Ramanujan Computing Centre
Anna University, Chennai

Vice-Chancellor Speaks...

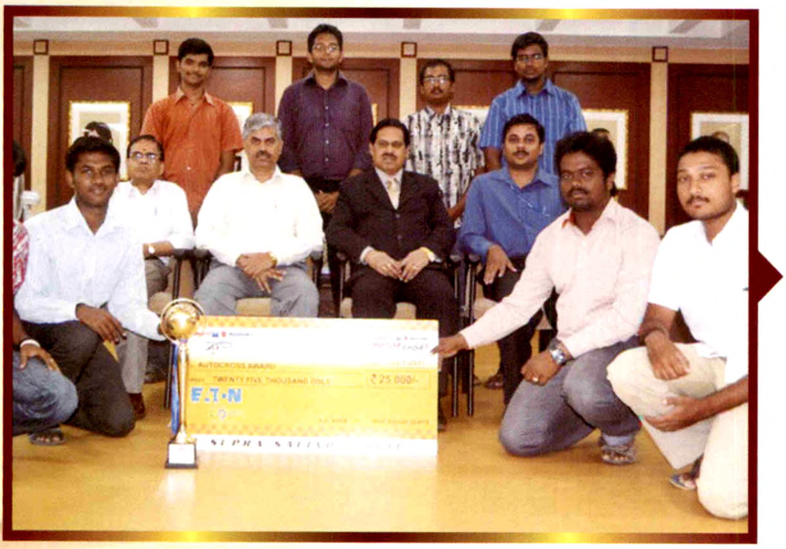
"Life isn't a matter of milestones, but moments," said Rose Kennedy. Looking back and ahead, I am happy that this academic year has heralded new beginnings and achievements. The alumni of Anna University are spread globally, and the College of Engineering Guindy Global Alumni Meet (CEGGAM) 2011 was a bold venture to bring in 850 alumni from different corners of the world on 3rd July to be a part of the memorable occasion to share their present and past experiences. Another distinguished alumnus who visited the alma mater is Dr. APJ Abdul Kalam, the former President of India, who enlightened the fresh entrants of the four constituent colleges with his inspirational speech. I congratulate Professor P.C Chandrasekharan, the former Dean, for bringing out a book titled *Understanding the Universe*. The alumni attended the book release function in large number and felt honored for being a part of the programme.

Anna University has once again reiterated its commitment to the society by signing an MOU with Apollo Hospital, Chennai, to promote and support education and research in the quest for quality Health Care for everyone. I am proud to say that Anna University has launched the "Microsoft Anna University Faculty Award" for case studies presented on "Cloud Computing" in Education and "Microsoft Initiative I-Spark Programme" to foster and support innovations and spark the ecosystem by creating skills, jobs and entrepreneurship in the campus. I also congratulate the 12 faculty members who were felicitated by the Centre for Technology Development and Transfer (CTDT) on 5th September on the occasion of the Teacher's Day for their excellent sponsored research and qualitative consultancy work.

According to Abraham Lincoln, one of the illustrious Presidents of the US, "And in the end it's not the years in your life that count. It's the life in your years." I am sure all of you will have a meaningful, purposeful and successful year ahead.

(Dr. P. Mannar Jawahar)
Vice Chancellor

VICE-CHANCELLOR Prof. Dr. P. MANNAR JAWAHAR's PROGRAMME DURING JULY - SEPTEMBER 2011



With students from the Department of Automobile, MIT Campus who won the Second Prize in the Design and Fabrication of Formula-1 Race Car – a national level SAE competition held at MMSC, Chennai from 1st to 3rd July 2011.

CEGAM 2011
Alumni Association
College of Engineering Guindy Global Alumni Meet
3rd July 2011

Presiding over the Inaugural Function of the College of Engineering Global Alumni Meet 2011 on 3rd July 2011. Er. G.Parthasarathy, IFS (1962 EEE), Former Ambassador to Pakistan was the Chief Guest.

Distributing Promotion Orders to Cooks and Assistant Cooks in CEG Hostels on 7th July 2011.

VICE-CHANCELLOR Prof. Dr. P. MANNAR JAWAHAR's PROGRAMME DURING JULY - SEPTEMBER 2011

With the newly elected Office-bearers of Students' Association and Arts Society of CEG, Guindy, for the year 2011–12 on 7th July 2011.

Welcoming the delegation from various French Universities on 13th July 2011.

Presenting a memento to Prof. Ved Prakash, Chairman, University Grants Commission, New Delhi, for delivering the Padmabhushan Dr V.C. Kulandaiswamy Endowment Lecture on "Future of Higher Education in India" in on14th July 2011.

VICE-CHANCELLOR Prof. Dr. P. MANNAR JAWAHAR's PROGRAMME DURING JULY - SEPTEMBER 2011

Signing an MoU with Microsoft, USA, to launch the I-spark Programme on 22nd July 2011.

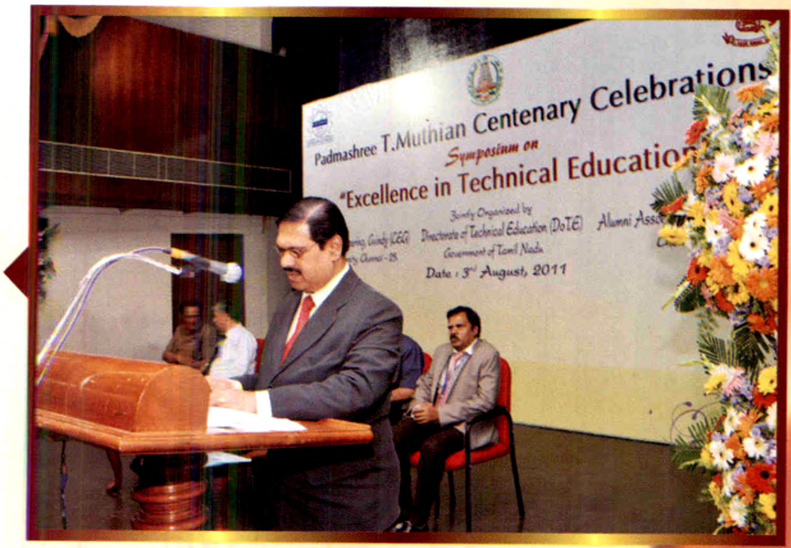
Awarding Certificates to the delegates of the 15th batch of Six Sigma Green Belt Programme at AU-TVS CQM on 25th July 2011.

Felicitating staff members who retired on 27th July 2011.

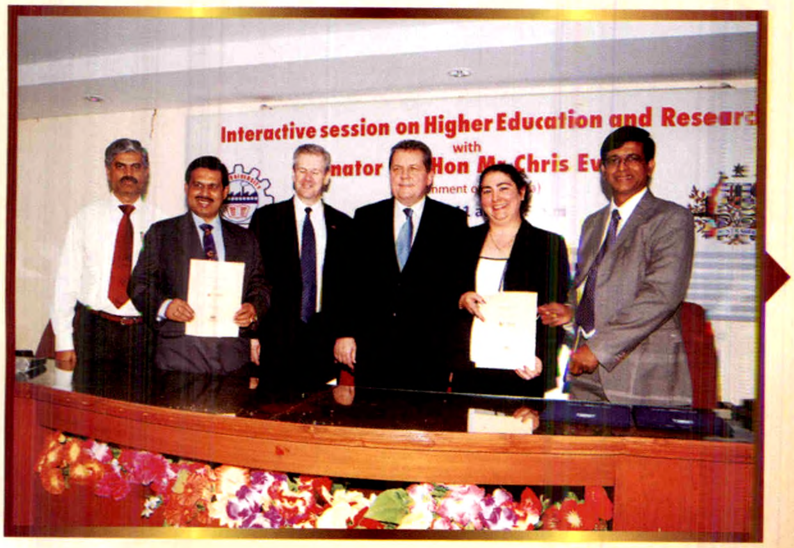
VICE-CHANCELLOR Prof. Dr. P. MANNAR JAWAHAR's PROGRAMME DURING JULY - SEPTEMBER 2011

Participating in the Orientation Programme for the first year students of CEG, ACTech and SAP on 1st August 2011.

Addressing the audience at the inaugural function of the symposium on "Excellence in Technical Education" conducted on the occasion of the Centenary Celebrations of Padmashree Muthian, the First Director of Technical Education, on 3rd August 2011.



Padmashree T.Muthian Centenary Celebrations
Symposium on
"Excellence in Technical Education
Date : 3rd August, 2011



Interactive session on Higher Education and Research
with

Signing an MoU with the Vice-Chancellors of The University of Sydney and University of New South Wales in the presence of Senator, the Hon'ble Mr. Chris Evans, Minister for Tertiary Education, Australia, during the Interaction session on Higher Education and Research on 4th August 2011.

VICE-CHANCELLOR Prof. Dr. P. MANNAR JAWAHAR's PROGRAMME DURING JULY - SEPTEMBER 2011

Honouring Dr.A.P.J.Abdul Kalam who delivered a motivational talk to the first year students of Anna University at MIT campus on 6th August 2011.

Inaugurating the Society of Industrial Engineers on 8th August 2011.

With recipients of the Anna Centenary Research Fellowship Awards on 10th August 2011.

VICE-CHANCELLOR Prof. Dr. P. MANNAR JAWAHAR's PROGRAMME DURING JULY - SEPTEMBER 2011

Inaugurating the book exhibition in the Main Campus on 10th August 2011.

PERSONALITY & CHARACTER DEVELOPMENT PROGRAMMES
ANNA UNIVERSITY, CHENNAI
&
YUVA SHAKTHI, CHENNAI
YOUTH MOTIVATION CAMPAIGN 2011

Inaugurating Personality & Character Development Programmes on 13th August 2011.

Inaugurating the R.O Plant / Accu Pressure Walking Track and Multi-Gym Facilities at the University Sports Complex on 15th August 2011.

VICE-CHANCELLOR Prof. Dr. P. MANNAR JAWAHAR's PROGRAMME DURING JULY - SEPTEMBER 2011

Addressing the students during the Independence Day Celebrations on 15th August 2011.

With Prof.Patrick Chedmail, Director, Ecole Centrale de Nantes, France, during the signing of Double degree agreement of Academic Cooperation with the group of five Ecoles Centrales, France, on 16th August 2011

DEVELOPING MODERNIZATION STRATEGIES FOR IRRIGATION SYSTEM OPERATION
Dr. N.K.Ambujam

Inaugurating the Training Programme on "Developing Modernization Strategies for Irrigation System Operation" on 16th August 2011.

VICE-CHANCELLOR Prof. Dr. P. MANNAR JAWAHAR's PROGRAMME DURING JULY - SEPTEMBER 2011

INAUGURATION OF STUDENTS QUALITY CLUB ACTIVITIES
2011 - 2012

Receiving the first edition of the Students Quality Club Newsletter – Quality Express, at the inauguration of Students Quality Club Activities 2011–12 on 18th August 2011.

Awarding certificates to the delegates of the 16th batch of Six Sigma Green Belt Programme on 22nd August 2011.

Welcoming Prof.Toshiyuki Sawa , Hiroshima University, Japan, during the Inauguration of the Indo-Japan Workshop on "Recent Trends in Materials and Devices" on 5th September 2011.

VICE-CHANCELLOR Prof. Dr. P. MANNAR JAWAHAR's PROGRAMME DURING JULY - SEPTEMBER 2011

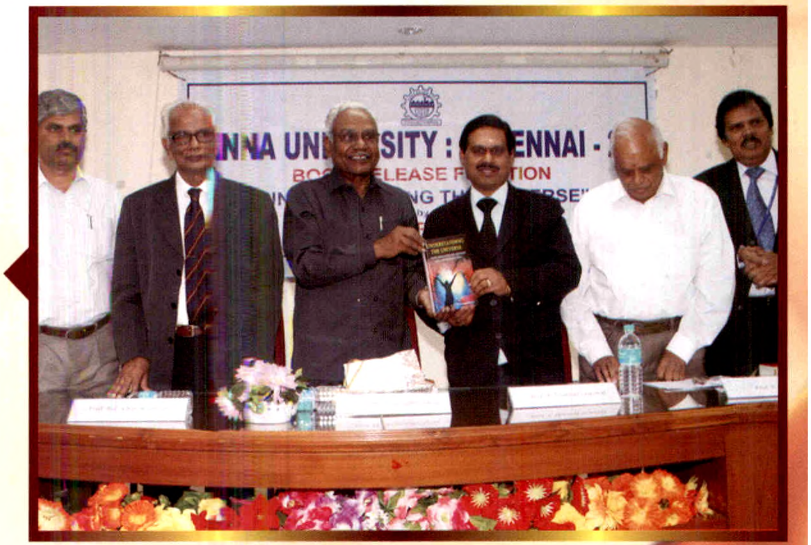
With Prof.E.Balaguruswamy, Member (Education), State Planning Commission, during the Teachers' Day Celebrations & Awards Function for Active Researchers and Consultants on 5th September 2011.

Addressing the participants during the inauguration of the One-day Seminar on "Ceramic Raw Materials" conducted by the Department of Ceramic Technology on 9th September 2011.

Inaugurating the Cancer Screening Programme at Kalambakkam Village, Tiruvallur District on 14th September 2011.

VICE-CHANCELLOR Prof. Dr. P. MANNAR JAWAHAR's PROGRAMME DURING JULY - SEPTEMBER 2011

Garlanding the Anna statue at University campus on the occasion of 103rd Anna Birth Anniversary of former Chief Minister C.N.Annadurai on 15th September 2011.



Receiving the first copy of the book written by Prof.P.C.Chandrasekaran, former Dean of Anna University, Chennai on 19th September 2011.

Department of Architecture
School of Architecture and Planning, Anna University, Chennai
organise
Workshop
"Chennai: Human Space – Cultural Space"
19. September 2011 – 14. October 2011
by
of. Günter Nest

Signing MoU with Prof.Gunter Nest, Co-ordinator, University of Technology, Berlin, Germany on 19th September.

UNIVERSITY DEPARTMENTS / CENTRES

SPONSORED PROJECTS

Name of the Co-ordinator	Project Title	Funding Agency	Amount Sanctioned (Rs. in lakh)
DEPARTMENT OF CIVIL ENGINEERING			
Dr. R. Senthil	Behaviour of FRP-jacketed Steel Hollow Sections Under Axial Compression	UGC	6.678
DEPARTMENT OF MINING ENGINEERING			
Dr. L. Ajay Kumar	Development of Software for prediction of Subsidence by 3D Numerical Modeling for SCCL Mines	MOC	53.8
DEPARTMENT OF PHYSICS			
Dr. K. Sivakumar	Supramolecular Framework Studies in Dihydrogen Phosphate Salts for Catalytic and Storage Applications	UGC	6.983
Dr. R. Murugaraj	Experimental Investigations on Electrical Relaxation Process in Solid State Ionic Materials	UGC	5.718
DEPARTMENT OF CHEMISTRY			
Dr. R.Y. Sheeja	Development and Assessment of Porois Poly L-Lactic(PLLA)-Silk Fibroin-Curcumin Nano Fibres for Drug Delivery	DST	2.382
DEPARTMENT OF GEOLOGY			
Dr. R. Nagendra	Sequence Biostratigraphy of Cretaceous and Paleocence Sediments of Cauvery Basin, South India	UGC	8.20
Ms. Parimala Renganayaki	Managed Aquifer Recharge Evaluating the Impact of Check Dam on Groundwater	UGC	22.6
Dr. T. Subramani	Hydroinformatics Decision Support System for Protection of Groundwater Head in Vattamalaikarai River Basin	DST	23.78
DEPARTMENT OF MEDIA SCIENCES			
Dr. S. Arulchelvan	Communication Strategy for Sanitation and Hygiene Behaviour Change & Acceleration of the Total Sanitation Campaign in Tamilnadu	TSC-CCDU-IEC	7.38875
DEPARTMENT OF CHEMICAL ENGINEERING			
Ms. S.R. Vijayalakshmi Devi	Screening of Dye Degrading Organisms and Enhanced Biodegradation of Textile Dye Bath Waste Water by Acclimatization and Biostimulation Methods	DST	14.16
DEPARTMENT OF BIO-TECHNOLOGY			
Dr. B.S. Lakshmi	Microbial Biotransformation Using Drugs as Substrates	UGC	8.828

Name of the Co-ordinator	Project Title	Funding Agency	Amount Sanctioned (Rs. in lakh)
CRYSTAL GROWTH CENTRE			
Prof. J. Kumar	Validation of Auto-range Capacitance Measurement Instrumentation as Clinical Biochemical Analyzer	DST	20.6208
CENTRE FOR NANOSCIENCE AND TECHNOLOGY			
Dr. T. Devasena	Determination LC 50 and Sub-chronic Neurotoxicity of Diesel Exhaust Particles	UGC	9.928
CENTRE FOR CLIMATE CHANGE			
Dr. A. Ramachandran	Mineral CO_2 Sequestration by Carbonation of Industrial, Alkaline Solid Residues	DST	52.90772
AU-KBC RESEARCH CENTRE			
Dr. P. Gajalakshmi	Study of Effects of breast Cancer Drugs on Endothelial Cells and Nitric Oxide Signaling	DST	22.8

From Candles to Soap

In 1879, Procter and Gamble's best seller was candles. But the company was in trouble. Thomas Edison had invented the light bulb and it looked as if candles would become obsolete. Their fears became reality when the market for candles plummeted since they were now sold only for special occasions.

The outlook appeared to be bleak for Procter and Gamble. However, at this time, it seemed that destiny played a dramatic part in pulling the struggling company from the clutches of bankruptcy. A forgetful employee at a small factory in Cincinnati forgot to turn off his machine when he went to lunch. The result? A frothing mass of lather filled with air bubbles. He almost threw the stuff away but instead decided to make it into soap. The soap floated. Thus, Ivory soap was born and became the mainstay of the Procter and Gamble Company.

Why was soap that floats such a hot item at that time? In Cincinnati, during that period, some people bathed in the Ohio River. Floating soap would never sink and consequently never got lost. So, Ivory soap became a best seller in Ohio and eventually across the country also.

Like Procter and Gamble, never give up when things go wrong or when seemingly unsurmountable problems arise. Creativity put to work can change a problem and turn it into a gold mine.

Source : **The Internet**

CONFERENCES / WORKSHOPS / LECTURES / SYMPOSIA / TRAINING PROGRAMMES / SEMINARS / EXHIBITIONS / CULTURALS ORGANIZED

Date	Programme	Organized by	Dignitaries
JULY 2011			
14.07.11	Padmabhushan Dr. V.C. Kulandaiswamy Endowment Lecture on "Future of Higher Education in India"	Anna University, Chennai	The 9th Endowment Lecture was delivered by **Prof. Ved Prakash,** Chairman, University Grants Commission (UGC), New Delhi, and **Dr. P. Mannar Jawahar,** Vice-Chancellor, Anna University, Chennai, presided over the function.
19.07.11	TECHKNOW-2011	Chairman & Trustee of AIMO (TNSB) L.R. & D TRUST & Members of Managing Committee, AIMO (TNSB)	**Dr. P. Mannar Jawahar,** Vice-Chancellor, Anna University, Chennai, was the Chief Guest of the day and presented the AIMO (TNSB) Innovation Award.
25.07.11	Inauguration of Hands-on workshop on "Biophysical and Biotechnological Research Techniques for Scientists and Scholars"	The AU-KBC Research Centre, MIT Chennai, Anna University, Chennai	The workshop was inaugurated by **Dr. Asit Mandal,** Director, CLRI (CSIR), Chennai in the presence of **Prof. S. Thamarai Selvi,** Dean, MIT Campus, Anna University, Chennai.
27.07.11	Inauguration of the "TULIP International Hostel"	Anna University, Chennai	The Hostel was inaugurated by **Dr. P. Mannar Jawahar,** Vice-Chancellor, Anna University, Chennai.
AUGUST 2011			
03.08.11	Inauguration of Padmashree T. Muthian Centenary Celebrations Symposium on "Excellence in Technical Education"	College of Engineering, Guindy (CEG), Alumni Association CEG (AACEG) & Directorate of Technical Education (DoTE), Govt. of Tamil Nadu	The function was inaugurated **Thiru. Ramesh Chand Meena,** IAS, Commissioner of Technical Education, Directorate of Technical Education (DoTN), Chennai, and presided over by Prof. **Dr. P. Mannar Jawahar,** Vice-Chancellor, Anna University, Chennai.
04.08.11	Interaction Session on "Higher Education and Research"	Anna University, Chennai in association with the Australian Consulate General	The Interaction session was formulated by Senator the **Hon'ble Mr. Chris Evans,** Minister for Tertiary Education and **Dr. P. Mannar Jawahar,** Vice-Chancellor, Anna University, Chennai, presided over the session.
04.08.11	Inauguration of "Association of Manufacturing Engineers - 2011-12"	Department of Manufacturing Engineering, Anna University, Chennai	**Mr. Mahendra Chaudhri,** DGM, Shimadzu Asia Pacific, Singapore, was the Chief Guest of the day.

Date	Programme	Organized by	Dignitaries
08.08.11	Inauguration of "The Society of Industrial Engineers" for the Academic Year 2011-12	Department of Industrial Engineering, Anna University, Chennai	The function was inaugurated by **Dr. P. Mannar Jawahar,** Vice-Chancellor, Anna University Chennai and **Dr. Krishnaswami Srihari,** Director of Watson Institute for Systems Excellence, State University of New York, Binghamton, USA delivered the keynote address. **Dr. P. Shahubudeen,** HOD, Department of Industrial Engineering, Anna University, Chennai presided over the function.
10.08.11	The Award Function of "Anna Centenary Research Fellowship"	Centre for Research, Anna University, Chennai	The function was jointly presided over by **Dr. P. Mannar Jawahar,** Vice-Chancellor, Anna University, Chennai and **Dr. S. Shanmugavel,** Registrar, Anna University, Chennai.
10.08 11	Book Exhibition	University Library, Anna University, Chennai	The exhibition was inaugurated by **Dr. P. Mannar Jawahar,** Vice-Chancellor, Anna University, Chennai.
11.08.11	Inaugural Function of the "Society of Geoinformatics Engineering"	Institute of Remote Sensing, Department of Civil Engineering, Anna University, Chennai	The function was inaugurated by **Major General (Dr) B. Nagarajan,** Director, Surveying & Mapping, Hyderabad, India and **Dr. M. Sekar,** Dean, CEG, Anna University, presided over the function.
15.08.11	Inauguration of the "New Hostel Office"	Anna University, Chennai	**Dr. P. Mannar Jawahar,** Vice-Chancellor, Anna University, Chennai, inaugurated the New Hostel Office.
16.08.11	Faculty Training Programme on "Developing Modernization Strategies for Irrigation System Operation"	Centre for Water Resources, Anna University, Chennai & Water Resource Department, Public Works Department, Government of Tamil Nadu	The training programme was presided over by **Dr. P. Mannar Jawahar,** Vice-Chancellor, Anna University, Chennai and **Er. K.R. Govindaraju,** Chief Engineer, WRD-PWD, Institute for Water Studies, Tharamani, Chennai inaugurated the training programme.
17.08.11	Inauguration of "Electronics and Communication Engineers' Association"	Department of Electronics and Communication Engineering, Anna University, Chennai	The Chief Guest for the day was **Mr. Aravind Thiagarajan,** Chairman & Chief Inventor, HD Medical Services (India) Pvt. Ltd., Chennai and the function was presided over by **Dr. M. Sekar,** Dean CEG, Anna University, Chennai.
18.08.11	Inauguration of "Students Quality Club Activities - 2011-2012"	AU-TVS Centre for Quality Management & Students Quality Club, Anna University, Chennai	**Dr. P. Mannar Jawahar,** Vice-Chancellor, Anna University, Chennai, presided over the function and **Shri. C.N. Prasad,** Group President & CEO, Sundaram Clayton Ltd. inaugurated the function.

Date	Programme	Organized by	Dignitaries
18.08.11	Inauguration of Activities of Students Association & Arts Society "Freshers Day"	Students Association & Arts Society - CEG, AC Tech & SAP Anna University, Chennai	**Thiru. Vijay,** Cine Director, was the Chief Guest and **Dr. P. Mannar Jawahar,** Vice-Chancellor, Anna University, Chennai, presided over the function.
24.08.11	Inaugural function of the activities of "The Soceity of Civil Engineers"	Department of Civil Engineering, CEG Anna University, Chennai	**Mr. M.B. Nirmal,** Founder & Chairman Exnora International, was the Chief Guest and **Dr. P. Mannar Jawahar,** Vice-Chancellor, Anna University, Chennai, delivered Special Address.
25.08.11	Inaugural function of the activities of "The Society of Printing Engineers"	Department of Printing Technology, CEG Anna University, Chennai	**Mr. K. George Thomas,** Chief General Manager (Marketing), TNPL, Chennai, was the Chief Guest and **Dr. P. Mannar Jawahar,** Vice-Chancellor, Anna University, Chennai, presided over the function.
26.08.11	Celebration of "Madras Day 2011" on the theme "Chennai - Past, Present & Future"	Department of Architecture, SAP, Anna University, Chennai	**Dr. P. Mannar Jawahar,** Vice-Chancellor, Anna University, Chennai, presided over the function and **Thiru. K. Rajaraman, IAS** Managing Director, Chennai Metro Rail Ltd., was the guest of honour.
26.08.11	Opening ceremony of "High Resolution X-ray Diffraction (HRXRD), Photoluminescence (PL) Laboratory and Scanning Probe Microscopy (SPM) coupled Nanoindenter Laboratory"	Crystal Growth Centre, Anna University, Chennai	**Dr. P. Mannar Jawahar,** Vice-Chancellor, Anna University, Chennai, opened the facility.
29.08.11	Certificate Distribution Function of the Foreign Language Courses	Centre for International Affairs and Department of English, Anna University, Chennai	**Dr. P. Mannar Jawahar,** Vice-Chancellor, Anna University, addressed the students and distributed the certificates.
30.08.11	Refurbished Circulation Counter of SAP Library	University Library and School of Architecture and Planning, Anna University, Chennai	**Dr. P. Mannar Jawahar,** Vice-Chancellor, Anna University, inaugurated the counter.
		SEPTEMBER 2011	
05.09.11	Indo-Japan Workshop on "Recent Trends in Materials and Devices"	Anna University, India with Hiroshima University, Japan	**Dr. P. Mannar Jawahar,** Vice-Chancellor, Anna University, Chennai, inaugurated the Workshop.
05.09.11	Teachers' Day Celebrations and Awards Function	Centre for Technology Development and Transfer, Anna University Chennai	**Prof. Dr. E. Balagurusamy,** Member (Education), State Planning Commission, Tamilnadu (Former Vice-Chancellor, Anna University, Chennai and **Dr. P. Mannar Jawahar,** Vice-Chancellor, Anna University, Chennai, presided over the function.

Date	Programme	Organized by	Dignitaries
09.09.11	One Day Seminar on "Ceramic Raw Materials" & Inauguration of InCerS Student Chapter of Anna University & Inauguration of the Association of Ceramic Technologists	Department of Ceramic Technology, Anna University, Chennai & Indian Ceramic Society Tamilnadu Chapter	**Dr. P. Mannar Jawahar,** Vice-Chancellor, Anna University, delivered the inaugural address and **Dr. A.L. Sashi Mohan** President, Indian Ceramic Society, was the Chief Guest of the Function.
14.09.11	"Cancer Screening for Women of Kalambakkam Village" in association with "PENN NALAM", Women for Women Wellness Centre	NSS Unit - 10, College of Engineering, Guindy, Anna University, Chennai	**Dr. P. Mannar Jawahar,** Vice-Chancellor, Anna University, was the Chief Guest and Inaugurated the function. **Dr. M. Sekar,** Dean, CEG Campus, Anna University, Chennai, presided over the function.
14.09.11	Inauguration of SAIE	Society of Agricultural and Irrigation Engineers, Centre for Water Resources, CEG Anna University, Chennai	**Mr. M.R. Ramasubramaniyan** Director, National Agro Foundation, Taramani, Chennai was the Chief Guest.
15.09.11	Inauguration of Girls Forum AAKRITI "Out of the Dark"	College of Engineering, Anna University, Chennai	**Prof. Dr. Udaya Mahadevan** Loyala College was the Chief Guest and **Dr. P. Mannar Jawahar** Vice-Chancellor, Anna University, Chennai, presided over the function.
16.09.11	Inauguration of KRYSTA'11 an intra-college technical symposium	Society of Materials Science Engineers, Department of Mechanical Engineering CEG, Anna University, Chennai and Madras Metallurgical Society - Students' Chapter	**Dr. S.K. Seshadri** Emeritus Professor, Department of Metallurgical and Materials Engineering, IIT Madras was the Chief Guest and **Dr. P. Mannar Jawahar** Vice-Chancellor, Anna University, presided over the function.
16.09.11	The Literary Club Inaugural Fest in union with the Sesquicentennial Celebrations of Rabindranath Tagore	The Literary Club, CEG, Anna University, Chennai	**Dr. Padmavathy Srinivasan,** CEO Winspire, was the Chief Guest and **Dr. M. Sekar** Dean, CEG, Anna University, Chennai presided over the function.
17.09.11	Club Day Celebrations	Alumni Club Anna University, Chennai	**Dr. P. Mannar Jawahar** Vice-Chancellor, Anna University, was the Chief Guest.
19.09.11	Book Release Function - "Understanding the Universe - From the quantum world of the infinitesimal to the cosmic realm of the infinite" by Prof.P.C. Chandrasekaran, Former Dean of Post Graduate Studies, Anna University, Chennai	Anna University, Chennai	**Prof. M. Anandakrishnan** Chairman, IIT Kanpur Former Vice-Chancellor, Anna University, Chennai was the Chief Guest and **Dr. P. Mannar Jawahar** Vice-Chancellor, Anna University, Chennai, presided over the function.

Date	Programme	Organized by	Dignitaries
19.09.11	Workshop on "Chennai:Human Space-Cultural Space"	Goethe-Institute / Max Mueller Bhavan, Chennai and Department of Architecture, SAP Anna University, Chennai	**Dr. P. Mannar Jawahar** Vice-Chancellor, Anna University, delivered the inaugural address and **Prof. Dr. Gunter Nest** Habitat Forum Berlin, Overseas Visiting Professor, Anna University, Chennai conducted the workshop.
22.09.11	Asia-Pacific Workshop on Materials Characterization	Crystal Growth Centre Anna University, Chennai	**Dr. G. Sundararajan** Director, ARCI, Hyderabad inaugurated the Workshop and **Dr. P. Mannar Jawahar** Vice-Chancellor, Anna University, Chennai, presided over the function.
24.09.11	NSS Day Celebration	National Service Scheme Cell, Anna University, Chennai	**Dr. M. Sekar** Dean, College of Engineering, Guindy Anna University, Chennai presided over the function and **Thiru. J.S. Santhanam** Chief Director, QUEST, Chennai gave the Motivational Talk.
30.09.11	First Dr. G.S. Laddha Memorial Lecture on "Milestones in Chemical Industry" by Prof. M.M. Sharma, FRS Emeritus Prof. of Eminence, Institute of Chemical Technology, Mumbai	Department of Chemical Engineering, AC Tech, Anna University, Chennai and Indian Institute of Chemical Engineers (IIChE) Chennai Region Centre (CRC)	**Dr. P. Mannar Jawahar,** Vice-Chancellor, Anna University, Chennai, presided over the function.

ANNA EDUSAT

PROGRAMME SCHEDULE FOR OCTOBER 2011

Date	Stream	Session I 9.00 a.m. - 10.30 a.m.	Session II 11.00 a. m. - 12.30 p. m.
03.10.2011	B.E/B.Tech General	Engineering Graphics (I sem) Dr.Velamurali	Mathematics – I (I sem) Dr.T.N.Shanmugam
10.10.2011	B.E/B.Tech General	Engineering Graphics (I sem) Dr.Velamurali	Mathematics – I (I sem) Dr.T.N.Shanmugam
17.10.2011	B.E/B.Tech General	Engineering Graphics (I sem) Dr.Velamurali	Mathematics – I (I sem) Dr.T.N.Shanmugam
24.10.2011	B.E/B.Tech General	Engineering Graphics (I sem) Dr.Velamurali	Mathematics – I (I sem) Dr.T.N.Shanmugam
31.10.2011	B.E/B.Tech General	Engineering Graphics (I sem) Dr.Velamurali	Mathematics – I (I sem) Dr.T.N.Shanmugam
PROGRAMME SCHEDULE FOR NOVEMBER 2011			
14.11.2011	B.E/B.Tech General	Engineering Graphics (I sem) Dr.Velamurali	Mathematics – I (I sem) Dr.T.N.Shanmugam
21.11.2011	B.E/B.Tech General	Engineering Graphics (I sem) Dr.Velamurali	Mathematics – I (I sem) Dr.T.N.Shanmugam
28.11.2011	B.E/B.Tech General	Engineering Graphics (I sem) Dr.Velamurali	Mathematics – I (I sem) Dr.T.N.Shanmugam

PAPERS PRESENTED / PUBLISHED / AWARDS RECEIVED / CONSULTANCY / SHORT-TERM COURSES / LECTURES DELIVERED / OTHERS

DIVISION OF STRUCTURAL ENGINEERING

- **Best Paper Award - Certificate of Merit**

  Dr. G.M. Samuel Knight, Mr. N. Prasada Rao, Mr. N. Lakshmanan and Mr. Nagesh R. Iyer, "Investigation of Transmission Line Tower Failures", Journal of Engineering Failure Analysis, Vol.17, Issue 5, pp. 1127-1141, July 2011.

DEPARTMENT OF MINING ENGINEERING

- **Nomination**

  Mr. P. Balamadheswaran appointed for the post of Secretary for Mining Engineers' Association of India, Tamilnadu Chapter for the year 2011-2013.

- **Papers Presented**

  Mr. P. Balamadeswaran presented a paper on "Safety Audit in Mines" in Tamilnadu State Safety Week Celebrations conducted by Madras Cements Limited on 02.09.2011.

- **Papers Published**

  Mr. P. Balamadeswaran and Mr. A.K. Mishra, "CARDOX - An alternative to explosives", Mining Engineers' Journal, Vol.12, No.12, pp. 23-27, July 2011.

- **Consultancy**

  Dr. K. Srinivas, Dr. K.V. Shanker and Mr. P. Balamadeswaran, consultancy project on "Drilling and Blasting Design for Shiplift Supporting Berth at Jaigad Port" worth Rs.6,00,000/- for M/s. Jaigad Ports & Infrastructure Private Limited for a period of 2 months from June to July 2011.

  Dr. K. Srinivas and Dr. K.V. Shanker, consultancy project on "Measures to Control Airborne Dust from Handling of Dusty Cargo at Chennai Port" worth Rs.5,00,000/- for M/s. Sical Logistics Limited, Chennai for a period of 2 months from July to August 2011.

  Mr. L. Ajay Kumar, consultancy project on "Report of Investigation on Pit Slope Stability of Iron Ore Mines" worth Rs.2,00,000/- for M/s. Nidhi Mining Private Limited for a period of 2 months from June to July 2011.

  Mr. L. Ajay Kumar, consultancy project on "Scientific Study of Pit Slope Stability and Other Aspects of Granite Quarry at RL Puram" worth Rs.7,00,000/- for M/s. Chimakurty Granite Mines for a period of 3 months from May to July 2011.

DEPARTMENT OF ELECTRICAL AND ELECTRONICS ENGINEERING

- **Papers Presented**

  Mr. S. Ganesh Kumar presented a paper on "Comparative Study of Proportional Integral and Passivity Based Control for Buck Converter" in International Conference "SIMULTECH 2011" conducted by Institute for Systems and Technologies of Information, Control and Communication, Portugal at NH Hotel Leeuwenhorst, Noordwijkerhout, Netherlands from 29.07.2011 to 31.07.2011.

DEPARTMENT OF MATHEMATICS

- **Papers Published**

  Dr. G. Sethuraman and Ms. J. Kavitha, "Star Colouring Problem: The DNA Solution", Journal of Algorithms & Computational Technology, Vol 5, No.3, pp.423-436, 2011.

DEPARTMENT OF PHYSICS

Papers Presented

The following papers were presented in the International Conference on “Materials for Advanced Technologies” from 26.06.2011 to 1.07.2011 organized by Materials Research Society, Singapore :

Mr. R. Marx Nirmal and Mr. K. Sivakumar, “II-VI Semiconductors Nanoparticles from Metal-Diethyl Dithiocarbonate Complexes”

Mr. V. Anbarasu, Mr. P.M. Md. Gazalli, Mr. A. Manigandan and Mr. K. Sivakumar, “Effect of Calcium Substitution in Barium Hexaferrite System”.

Papers Published

Mr. R. Marx Nirmal, Mr. K. Pandian and Mr. K. Sivakumar, "Cadmium (II) Pyrolidine Dithiocorbanate Complex as Single Course Precursor for Complex as Single Source Precursor for the Preparation of CdS Nanocrystals by Microwave Irradiation and Conventional Heating Process", Applied Surface Science, Vol.257, pp. 2745-2751, 2011.

Mr. A. Manigandan, Mr. V. Anbarasu and Mr. K. Sivakumar, "Electrical and Magnetic Properties of Nd^{3+} - Substituted $GdBaSrCu_3O_7$ Superconductor", Physica C, Vol.471, pp.163-168, 2011.

Mr. A. Manigandan, Mr. V. Anbarasu and Mr. K. Sivakumar, "Superconducting Studies on Nd^{3+} and Dy^{3+} - Substituted $GdBaSrCu_3O_y$ System",Journal of Superconductivity and Novel Magnetism, Vol.24, pp.1877-1884, 2011.

Mr. R. Jagan and Mr. K. Sivakumar, "Self-assembled Supramolecular Sheet - and Channel-type Frameworks in the p-phenetidinium Hydrogen Phthalate and Cyclohexylaminium Hydrogen Phthalate Hemihydrate Salts", Acta Crystallographica, Vol.C67, No.2, pp.373-377, 2011.

DEPARTMENT OF CHEMISTRY

Papers Presented

Dr. D. Sangeetha presented two papers on “Bioreactors and Scale-up of Expression Improved Performance of Microbial Fuel Cell from the Effect of Different Types of Anodic Inoculums” and "Batch and Continuous Mode Operation of Single Chamber MFC using SPEEK Membrance for Electricity Generation from Dairy Waste Water" in the International Symposium on “Bioprocess Industry-Academic Interaction” at VIT University, Vellore from 24.07.2011 to 27.07.2011.

Dr. D. Sangeetha presented two papers on “Synthesis and Characterization of Polyacrylonitrile based Carbon Nanofibers as Support for Punanocatalyst in Fuell Cell Applications” and "Fabrication of PMMA/Psu/Nano Ceramic Composites for Orthopaedic Application" in National Conference on “Nanoscience and Technology (NCNN2011)” at the University of Madras, Chennai from 25.08.2011 to 27.08.2011.

Dr. D. Sangeetha presented two papers on “Synthesis, Characterization and Comparison of Performance of PSEBS based Bipolar IEMs with that of Commercial Membranes using Electrodialysis for Water Treatment” and "Synthesis and Characterization of PSEBS based chelating Membrance and its Absorption Isotherm and Kinetic Study in the Removal of Ni (II) and Cr (VI)ions" in Indo-UK Workshop on “Current Development of Waste Water Treatment - Advanced Separation Processes” at the National Institute of Technology, Trichy from 29.08.2011 to 31.08.2011.

Papers Published

Mr. S. Ravichandran, Mr. R. Balaji, Mr. B.S. Kannan, Ms. S. Elamathi, Dr. D. Sangeetha, Ms. J. Lakshmi, Mr. S. Vasudevan and Mr. G. Sozhan, "Sulfonated Polystyrene-block-(ethylene-ran-butylene-) block-polystyrene (SPSEBS) Membrance for Sea Water Electrolysis to Generate Hydrogen", ECS Transaction (International), Vol.33, No.27, pp157-166, 2011.

Lectures Delivered

Dr. S. Anandakumar, "Nanocomposites and Nanocoatings" in a One-day Seminar conducted by the Department of Chemistry, KGBR College of Arts and Science, Bharathiyar University, Coimbatore on 13.07.2011.

Dr. S. Anandakumar, "Nano-materials" in a One-day Workshop on "Recent Trends on Polymer Science & Technology" conducted by the Department of Chemical & Biochemical Engineering, St. Joseph College of Engineering, Chennai on 6.09.2011.

Awards

Mr. E. Mahendira Varman, Research Scholar, under the supervisor of **Dr. D. Sangeetha,** won the "Best Poster Award" in the International Symposium on "Bioprocess Industry-Academia Interaction", at VIT University, Vellore from 24.07.2011 to 27.07.2011.

DEPARTMENT OF ENGLISH

Paper Presented

Ms. Aruna Balachandran presented a paper on “Materials, Methods and Classroom Management in English Language Teaching (MMM-2011)” at the National Conference at Velammal Engineering College on 26.08.2011.

The following papers were presented in the National Conference "NCEST-2011" at GITAM Institute of Technology, GITAM University, Visakhapatnam on 23.09.2011 & 24.09.2011 :

Mr. ARS. Jayanth, “Activities for Teaching Scientific and Technical Writing”

Mr.P. Ramakrishnan, “Language of Science & Technology”.

Papers Published

Mr. Praveen Sam and Dr. Premalatha Rajan, "Individual Tutoring Plan (ITP) in Mapping Content for Teaching English Language Skills in Online Tutoring Environment", Thermatics Journal of English Language Teaching, Vol.1, No.3, pp.56-61, 2011.

Mr. P.Ramakrishnan, “Impact of Education in India”. **'Social Problems in India'** Ed. M.D.Allen Selvakumar, Ms. I.Jenita Mary and Mr. C.Chidambaram. Jaipur: Pointer Publications, pp.172-179, 2011.

Dr. S.P. Dhanavel, "English for All Purposes", in **'English for Specific Purposes: Teaching and Learning Strategies'**, Ed. Ms. N. Usha and Ms. J. Mythili, Prestige Books, New Delhi pp.33-38, 2011.

Lectures Delivered

Dr. S.P. Dhanavel, "Teaching Communicative English" to the participants of a Workshop on Communicative English, organized by Punjab Technical University, Jalandhar on 20.07.201 and 22.07.2011.

Dr. S.P. Dhanavel, "Recent Trends in ELT" to the participants of a UGC Refresher Course in English at the Academic Staff College, Bharathidasan University on 05.08.2011.

Dr. S.P. Dhanavel, "Communication Skills for Tamil Medium Students" to the Society of Civil Engineers, Anna University on 17.08.2011.

Dr.T.Shrimathy Venkatalakshmi was the Chief Guest & Judge for John F.Kennedy's Intercollegiate Debate at JBAS College for Women on 18.08.2011.

Dr. S.P. Dhanavel, "Writing for the Media" for the students of English Literature at Loyola College, Vettavalam, Thiruvannamalai District on 26.08.2011

Dr. S.P. Dhanavel delivered a Lecture on "Creative Writing" to the delegates of the National Conference on "Scientific and Technical Writing" organized by the Department of English, GITAM University, Vishakapatnam on 23.09.2011.

DEPARTMENT OF GEOLOGY

- **Papers Presented**

Mr. C. Lakshmi Narasimhan presented a paper on "Disaster Preparedness and Capacity Building Initiatives - An Indian Perspective" in the AICTE sponsored Faculty Development Programme on "Managing Disasters in Globalized Era" conducted by Vivekananda Institute of Information and Management Studies, Elayampalayam on 28.06.2011.

- **Papers Published**

Mr. R. Nagendra, Mr. B.V. Kamalakannan, Mr. Gargi Sen, Mr. Harry Gilbert, Mr. D. Bakkiaraj, Mr. A. Nallapa Reddy, Mr. B.C. Jaiprakash, "Sequence Surfaces and Paleobathymetric Trends in Albian to Maastrichtian Sediments of Ariyalur Area, Cauvery Basin, India", Journal of Marine and Petroleum Geology, Vol.28, pp. 895-905, 2011.

Mr. R. Nagarajan, Mr. J. Madhavaraju, Mr. J.S. Armstrong-Altrin and Mr. R. Nagendra, "Geochemistry of Neoproterozoic limestones of the Shahabad Formation, Bhima Basin, Karnataka, Southern India", Geosciences Journal, Vol.15, No.1, pp. 9-25, 2011.

- **Lectures Delivered**

Mr. C. Lakshmi Narasimhan delivered a Special Lecture on "Environmental Conservation" on the occasion of World Environment Day 2011 conducted by Government Museum, Chennai on 16.06.2011.

- **Equipments Purchased**

1. CHNSO Analyzer	(UGC DRS)
2. Portable Handheld XRF Analyzer	(UGC XI Plan)
3. Bore Hole Logger	(UGC XI Plan)
4. Advanced Binocular Microscope	(DST-FIST)
5. Total Station with DGPS	(DST-FIST)
6. Particle Size Analyzer	(UGC-CPESS)
7. GPR	(UGC-CPEES)

- **Forthcoming Events**

24th IGI Conference and Annual Convention on Coastal Dynamics and Geomorphology to be held from 19th to 22th October 2011.

DEPARTMENT OF CHEMICAL ENGINEERING

- **Papers Published**

Mr. C. Srinivasakannan and Mr. N. Balasubramanian, "Evaluation Kinetic Parameters for Drying of Granular Material in Fluidised Bed" Canadian Journal on Chemical Engineering & Technology, Vol.2, 2011.

Mr. C. Srinivasakannan and Mr. N. Balasubramanian, "Variations in the Design of Dual Fluidised Bed Gasifiers and Quality of Syngas from Biomass" Energy Sources, Vol.33, pp.349-359, 2011.

Mr.K.C. Praveen, Ms. K.V. Radha and Mr. N. Balasubramanian, "Electrochemical Treatment of Plating Effluent: Kinetics and Statistical Modeling", Arch. Environ. Sci, Vol.5, pp.17-24, 2011.

DEPARTMENT OF PLANNING

- **Papers Presented**

The following papers were presented by **Dr. Abdul Raza Mohamed** in India-USA Business Planning and Network Strategy Conference organized by Prakuruti Chennai and University of Findlay Ohio, USA in colloboration with the Department from 28.06.2011 to 30.06.2011 :

"Networking Strategies in Town and Country Planning"
"e-Governance - A Tool for Global Business and Local Municipal Organizational Management".

- **Paper Published**

  Dr. Abdul Raza Mohamed, "e-Governance Vs. e-Readiness in Urban Municipal Governments in Tamil Nadu, India", Global Strategy and Practice of e-Governance: Examples from Around the World published by the IGI Global Publication, London, 2011.

- **Organised**

  Three-days International Conference "India-USA Business Planning and Networking Strategy Conference" was organized by PRAKURUTI Chennai, University of Findlay Ohio, USA in collaboration with the Department of Planning as the Knowledge Partner from 28th to 30th June 2011.

- **Nomination**

  Dr. Abdul Razak Mohamed has been nominated as the Member of the Board of Studies, Department of Sociology, University of Madras, Chennai for the year 2011 to 2012.

CENTRE FOR TECHNOLOGY DEVELOPMENT AND TRANSFER

- The following Faculty Members received Active Researcher Award 2011 and Active Consultant Award 2011 on the Teachers' Day Celebrations & Awards Function for Active Researchers and Consultants on 5th September 2011. Prof.E.Balaguruswamy, Member (Education), State Planning Commission, participated in the function and distributed the awards :

Active Research Award 2011	Active Consultant Award 2011
1. **Dr. L. Elango**, Professor, Department of Geology	1. **Dr. J. Kumar,** Professor Centre for Crystal Growth
2. **Dr. K. Baskar,** Professor Centre for Cystal Growth	2. **Dr. D. Mohan,** Professor Department of Chemical Engineering
3. **Dr. S. Iniyan**, Professor Institute of Energy Studies	3. **Dr. V. Vaidehi,** Professor, Department of Computer Technology, MIT
4. **Dr. S. Thamarai Selvi,** Professor Department of Computer Technology, MIT	4. **Dr. R. Velraj,** Professor, Department of Mechanical Engineering
5. **Dr. R. Ramesh,** Professor Institute of Ocean Management	5. **Dr. N. Vasudevan,** Professor, Department of Civil Engineering
6. **Dr. R.B. Narayanan,** Professor, Centre for Bio-Technology	6. **Dr. K. Gunasekaran,** Associate Professor, Department of Civil Engineering

UNIVERSITY SPORTS BOARD

- The Vice-Chancellor **Prof. Dr. P. Mannar Jawahar** inaugurated (1) R.O. Plant / Accu Pressure Walking Track / Modern Art, (2) Multi Gym Facility (3) Open Air Theater and (4) Accommodation Rooms for Players in OAT at University Sports Complex on 15.08.2011.
- Students of College of Engineering Guindy won the Zone-II - Zonal Football Tournament held at Sri Venkateswara College of Engineering, Chennai from 25.08.2011 to 27.08.2011 and the same team secured Bronze in the Inter Zonal Tournament held at V.R.S. College of Engineering & Technology, Villupuram.
- **Ms. Pon N. Krithikha,** III Year B.E. / ECE was the Winner in the National Junior Women Championship held at Panaji, Goa from 07.09.2011 to 12.09.2011.

- **Mr. A. Velmurugan,** III Year B.E. / Mining and Ms. S. Sundari, IV Year B.E. / Chemical secured Gold in Inter Zone Cross Country Race held at Thiruvalluvar College of Engineering & Technology, Vandavasi on 08.09.2011.
- College of Engineering Guindy Badminton Men team won the Zone-II Zonal Badminton Tournament held at Rajalakshmi Engineering College, Chennai on 13.09.2011 and 14.09.2011.
- Alagappa College of Technology were Runners-up in the Inter Zone Kho-Kho (W) Tournament held at Anna University, Chennai organized by S.M.K. Forma Institute of Technology, Chennai.
- **Mr. M.R. Manikandan,** IV Year B.E. / ECE won the Silver Medal in Malaysian Youth Games and also the Silver Medal in Badminton Senior State Championship.
- **Mr. G. Karthick,** IV Year B.Tech / IT (Fencing), C. Ayshwarya II Year, B.E. / ECE and M.B. Balakrishnan, III Year B.E. / ECE (Swimming) have been presented "Young Achiever 2011" Awards by Rajiv Gandhi National Institute of Youth Development, Sriperumbudur.

NATIONAL SERVICE SCHEME CELL

- SSN College of Engineering along with Bhumi, an NGO organization organized a Children Festival "Siragugal" on 02.07.2011 and 03.07.2011. 1,500 children from 50 orphanages participated in this festival.
- Alagappa College of Technology (ACTech) conducted a cleaning work in the campus in connection with Kamarajar Birthday on 15.07.2011.
- Panimalar Institute of Technology along with St. John Ambulance, Chennai conducted a First Aid Awareness Programme on 22.07.2011.
- Sakthi Mariamman Engineering College organized "Plantation of Tree" programme on 23.07.2011.
- Sri Sai Ram Institute of Technology organized "Plantation of Tree" programme on 04.08.2011. Over 1,500 saplings were planted on the occasion.
- SSN College of Engineering conducted a talk on "Freedom is not Free" on 09.08.2011 on the occasion of "Quit India Day".
- SSN College of Engineering conducted a Blood Donation Camp in association with Govt. General Hospital, Chennai on 11.08.2011. More than 210 units of blood were donated.
- Madras Institute of Technology (MIT), Anna University, Chennai conducted a Personality and Character Development Programme for NSS Volunteers on 18.08.2011. Thiru. G.P. Sajith Babu, Head & Youth Officer, NSS Regional Centre, Dr. S. Thamarai Selvi, Dean, MIT and Dr. S. Selladurai, NSS Coordinator, participated and motivated the students.
- Aksheyaa College of Engineering conducted a Blood Donation Camp on 20.08.2011. More than 100 units of blood were donated on the day.

YOUTH RED CROSS

- A Youth Motivation Talk was organized by YRC, Anna University, as part of the 65th Independence Day Celebrations for the benefit of first year NCC, NSS, NSO & YRC student volunteers on 13.08.2011 in the Vivekananda Auditorium in association with Yuva Shakthi, an NGO. Prof. Dr. P. Mannar Jawahar, Vice-Chancellor, Anna University, Dr. M. Sekar, Dean, CEG Campus, Dr. B. Kumar, YRC Co-ordinator and Dr. S. Selladurai, NSS Co-ordinator participated. Chief Guest Mr. M.R. Venkatesh, a Chennai based Chartered Accountant delivered a lecture on the topic "Role of Youth in Indian Freedom". Best Volunteers Award for the year 2010-2011 was given to the YRC Student Volunteers of Anna University in the Independence Celebrations on 15.08.2011.
- Youth Red Cross Activities for the year 2011-2012 was inaugurated on 19.09.2011 at Rajam Hall, MIT Campus. Mr. M. Velmurugan, IES, Executive Vice-Chairman, Industries Department, Govt. of Tamil Nadu, delivered the inaugural address and Dr. V. Vaidehi, Dean in-charge, MIT delivered the presidential address. Dr. B.Kumar the YRC Co-ordinator delivered the Key-Note address. The YRC Programme Officers Prof. P. Sadagopan, Dr. S. Thangaiarasu and Mrs. T. Subasri organized the event in which 150 first year volunteers were present.

The **Literary Club** of College of Engineering Guindy conducted the Literary Fest in memory of the great poet and freedom fighter Rabindranath Tagore in his 150th birth year on 16th September. Various competitions like Creative Writing, Debates, and Literary Quiz were conducted on the day. Surpassing expectations, the competitions saw enthusiastic participation from the students. Dr. Padmavathy Srinivasan, CEO of Winspire, Dean, Dr. M. Sekar and The Head, Department of English, Dr. S. P Dhanavel were present during the valedictory function and addressed the students on the importance of reading for engineers. The Literary Clubs' aim has been to promote reading, provide a platform for students to share their views on various literary works and also discuss contemporary art and popular culture. The fest emphasized the fact that CEG does have a vibrant group of youngsters who are passionately interested in books, literature and reading more than ever. This year, the Literary club also plans to set up a library and launch an online literary magazine for the students.

Ph.D. DEGREE AWARDED

Name of the Candidate	Name of the Supervisor / Joint Supervisor	Date of Oral Exam	Title of the Thesis
FACULTY OF CIVIL ENGINEERING			
Mr. Y.K. Sabapathy	Dr. K. Nagamani	18.03.2011	Experimental and Analytical Study on GFRP Reinforced Concrete Deep Beams
Ms. T. Kavitha	Dr. S. Kaliappan	05.04.2011	Equilibrium and Kinetic Studies of Biogas Adsorption onto Porous Solids
Mr. M. Sahul Hameed	Dr. A.S.S. Sekar	08.04.2011	Study of Self Compacting Green Concrete made with Crusher Rock Dust and Marble Sludge Powder
Mr. B. Thanukumari	Dr. P. Perumal	29.04.2011	Studies on Hybrid Fibre Reinforced Beam-Column Joints under Reverse Cyclic Loading
Mr. S. Karthikeyan	Dr. A. Navaneetha Gopalakrishnan	01.06.2011	Studies on Development of Indigenous Microwave-Ultraviolet Reactor for Degradation of Model Phenolic Pollutants
Mrs. E. Sarojini	Dr. S. Jayanthi	24.06.2011	Anaerobic Digestion of Infectious Biomedical Waste with Effective Pretreatment Techniques
Mr. J. Prabakar	Dr. P. Devadas Manoharan Dr. M. Neelamegam	18.07.2011	Service Life Estimation of Reinforced Cement Concrete Structure Induced by Chloride Ions
Mr. T. Murali Krishna	Dr. G. Ravikumar	25.07.2011	Multi Criteria Analysis for Drought Assessment using Remote Sensing and GIS
Mr. T. Baskaran	Dr. S. Nagan	27.07.2011	Inflow and Sediment Yield Modelling of Vaigai Reservoir using Analytical and Neural Network Approach
FACULTY OF MECHANICAL ENGINEERING			
Mr. R. Narayanan	Dr. N. Murugan Dr. V. Selladurai (Supervisor in-charge)	24.01.2011	Finite Element Simulation of Residual Stresses and Optimization of Welding Sequence to Minimize Distortion in a GMA Welded Carbon Steel T-Joint
Ms. A.K. Narmadha	Dr. V. Selladurai	17.02.2011	An Exploration on Adoption of Inventory Optimization using Metaheuristic Techniques
Mr. V. Antony Aroul Raj	Dr. R. Velraj	17.02.2011	Studies on PCM based Modular Heat Exchanger for Free Cooling Application for Energy Management in Green Buildings
Mr. P. Tamil Selvam	Dr. P.S.S. Srinivasan Dr. E. Vallinayagam	18.02.2011	Studies on Condensation over Horizontal Integral Finned Tubes
Mr. G. Kumaraguruparan	Dr. T. Sornakumar	21.02.2011	Development and Testing of Microchannel Heat Sink for Cooling Applications

Name of the Candidate	Name of the Supervisor / Joint Supervisor	Date of Oral Exam	Title of the Thesis
Mr. R. Baskaran	Dr. K. Krishnaiah	22.02.2011	Performance Evaluation of Bus Depots and Routes and Determining the Headway for Single and Overlapping Routes
Mr. V. Muthukumar	Dr. M. Raajenthiren	23.02.2011	Experimental Investigations and Parametric Optimization of WEDM on Incoloy 800, Titanium Alloy and AISI D3 Tool Steel
Ms. K. Punitharani	Dr. N. Murugan	25.02.2011	Finite Element Simulation for Prediction of Bead Geometry and Residual Stresses in Stellite Hardfaced Gate Valve by PTAW Process
Mr. T.V. Christy	Dr. N. Murugan	01.03.2011	Production, Characterization and Friction Stir Welding of A1-TiB$_2$ Metal Matrix Composites
Mr. A K Shaik Dawood	Dr. S.S. Mohamed Nazirudeen	04.03.2011	Development of Technology for Making Porous Gray Cast Iron Castings with the Implementation of Box-Behnken Design
Mr. R. Senthil	Dr. N.V. Mahalakshmi	04.03.2011	Experimental and Numerical Investigations on the Effect of Rotating Cylindrical Disc on an Unconfined Isothermal Annular Swirling Jet
Mr. P. Muthu	Dr. V. Dhanalakshmi	10.03.2011	Design and Manufacturing Tolerance Optimization with Quality Loss Function
Mr. V. Janakiraman	Dr. R. Saravanan	11.03.2011	Concurrent Optimization of Operating Parameters and Tolernaces for CNC Machining Processes
Ms. N. Sangeetha	Dr. T. Alwarsamy	14.03.2011	Investigation of Chatter in Hard Machining using Viscoelastic Damper between Tool Holder and Insert
Mr. R. Kumaravelan	Dr. E. Vallinayagam Dr. P.S.S. Srinivasan	18.03.2011	Thermo-Mechanical Analysis of Functionally Graded Material Plates
Mr. C. Elanchezhian	Dr. R. Kesavan	06.04.2011	An integrated Multi-Criteria Decision Making Model Approach in Supplier Selection Process
Mr. V. Muthukumaran	Dr. V. Selladurai	07.04.2011	Behavioural Study of AISI 316L Stainless Steel usedin in Biomedical Applications under ION Implantation and QPQ Processes
Mr. D. Ganesh	Dr. G. Nagarajan	20.04.2011	A Study on Homogeneous Charge Compression Ignition (HCCI) Combustion of Diesel Fuel with External Mixture Formation
Mr. T. Lakshmanan	Dr. G. Nagarajan	28.04.2011	Experimental Study on Performance Optimization of Dual Fuel Engine using Acetylene-Diesel Fuel

Name of the Candidate	Name of the Supervisor / Joint Supervisor	Date of Oral Exam	Title of the Thesis
Mr. V. Hariharan	Dr. P.S.S. Srinivasan	29.04.2011	Study of Vibration Signatures of Bearings for Fault Diagnosis and Condition Monitoring
Mr. H. Ramamurthy	Dr. K. Jeyachandran Dr. N.V. Mahalakshmi	04.05.2011	Computational Fluid Dynamics Approach to Study the Gas Exchange Process in Small Two Stroke Engines
Mr. K. Soorya Prakash	Dr. S.S. Mohamed Nazirudeen	11.05.2011	Computational Establishment of Material Design and Product Design Domain Integrations - A Hybrid Approach
Mr. N. Mani	Dr. G. Thanigaiyarasu Dr. P. Chellapandi	20.05.2011	Application of Fracture Mechanics Concept to Demonstrate Leak Before Break Analysis in Steam Generator Shell Nozzle Junction
Mr. S.P. Srinivasan	Dr. P. Malliga	01.06.2011	Study and Analysis of Some of the Issues in Supply Chain of Jatropha Seed Production and Distribution
Mr. B. Rajendra Prasath	Dr. P. Tamilporai	1.06.2011	Optimization of Combustion Performance and Emission of Jatropha Biodiesel in a Turbocharged LHR Diesel Engine
Mr. S. Jayabal	Dr. U. Natarajan	20.06.2011	Development of Coir-Polyester Composites by E-Glass Hybridization and Assessment of Drilling Behavior
Mr. K. Mohan	Dr. N. Murugan	22.06.2011	Studies on Tungsten Carbide Hardfacing of Stainless Steel by Plasma Transferred Arc Welding
Mr. R. Karthikeyan	Dr. N. Nallusamy	24.06.2011	Performance and Emission Study on Diesel Engine Fueled by Turpentine Oil Using Various Fuel Admission Techniques
Mr. Nouby Mahdy Ghazaly Bashery	Dr. K. Srinivasan	28.06.2011	Study on Automotive Disc Brake Squeal using Finite Element Analysis and Design of Experiments
Mr. M. Mani	Dr. G. Nagarajan	29.06.2011	An Experimental Investigation to Study the Performance and Emission Characteristics of Waste Plastic Oil Fuelled Di Diesel Engine
Mr. M. Chinnapandian	Dr. R. Velraj	29.06.2011	Experimental Investigation and Thermodynamic Analysis of a Cascaded Latent Heat Storage System for Diesel Engine Waste Heat Recovery
Mr. C. Velmurugan	Dr. R. Subramanian	01.07.2011	Experimental Investigations on Wear and Machining Characteristics of Aluminium Hybrid Composites
Mr. L. Godson Asirvatham	Dr. D. Mohan Lal	04.07.2011	Experimental Studies on the Heat Transfer Chracteristics of Silver/Water Nanofluid

Name of the Candidate	Name of the Supervisor / Joint Supervisor	Date of Oral Exam	Title of the Thesis
Mr. R. Palanichamy	Dr. P. Nagaraj	01.07.2011	Heat Transfer Analysis in a Circular Tube with Internal Fin by Numerical Method
Mr. K. Senthilkumar	Dr. PSS. Srinivasan	08.07.2011	Performance Analysis of Centrifugal Atomizer Type Air Cooler Suitable for Industrial Sheds Located in Tropical Climates
Mr. J.D Darwin	Dr. D. Mohan Lal	12.07.2011	Studies on Optimisation of Cryogenic Treatment to Maximise the Wear Resistance of Piston Ring Materials
Mr. B. Vijaya Ramnath	Dr. R. Kesavan	21.07.2011	Development of Lean Kitting Model for Automotive Industry
Mr. K.R. Vijaya Kumar	Dr. V. Sundareswaran	04.08.2011	Studies on Piezothermoelastic Epoxy Cyanate Ester Matrix Glass Fibre Composites
Mr. M.R. Swaminathan	Dr. N.V. Mahalakshmi	03.08.2011	Flow and Turbulence Studies in Electrostatic Preciptator
Mr. A. Gunabalan	Dr. R. Ramaprabhu Dr. P.Tamilporai	12.08.2011	Effect of Combustion Chamber Geometry on Air Flow and Combustion in a Direct Injection Diesel Engine

FACULTY OF ELECTRICAL AND ELECTRONICS ENGINEERING

Ms. E. Jayashree	Dr. G. Uma	04.02.2011	Simulation and Implementation of Quasi-Resonant Power DC-DC Converters
Mr. L. Ashok Kumar	Dr. T. Ramachandran Dr. Ila Vennila	18.02.2011	Studies on Inculcating Electronics in Textile to Develop Wearable Electronics
Mr. M. Thangaprakash	Dr. A. Krishnan	14.03.2011	Performance Investigation on Integrated Controlled Z-Source Inverter using Modified Modulation Techniques
Mr. M. Balasingh Moses	Dr. P. Lakshmi Dr. V. Ramachandran	15.05.2011	Service Oriented Architectural Models for Power System Transient Stability Analysis
Ms. S. Jeyadevi	Dr. S. Baskar	17.05.2011	Evolutionary Algorithms based Decentralized Congestion Management for Multilateral Transactions
Ms. S. Visalakshi	Dr. S. Baskar	09.06.2011	Evolutionary Algorithms based Decentralized Congestion Management for Multilateral Transactions
Ms. K. Gnanambal	Dr. N. Kamaraj	13.06.2011	Single Phase and Three Phase Power Flower Analysis using Hybrid Differential Evolution and Particle Swarm Optimization
Ms. P. Aruna Jeyanthy	Dr. D. Devaraj	17.06.2011	Evolutionary Algorithm-based Techniques for Voltage Security Enhancement

Name of the Candidate	Name of the Supervisor / Joint Supervisor	Date of Oral Exam	Title of the Thesis
Mr. C. Govindaraju	Dr. K. Baskaran	27.06.2011	Sequential Switching Hybrid Sinusoidal Modulation Techniques for Cascaded Multilevel Inverter
Ms. P. Usharani	Dr. S. Rama Reddy	27.06.2011	Power Quality Improvement using Dynamic Voltage Restorer and Interline Power Flower Controller
Ms. N. Rathina Prabhu	Dr. N. Kamaraj	04.07.2011	Adaptive Neuro-Fuzzy Inference System based Power Quality Assessment
Ms. P. Rathika	Dr. D. Devaraj	05.07.2011	Development and Implementation of Novel Techniques for the Control of Shunt Active Filter
Mr. R. Murugan	Dr. K. Udayakumar	01.08.2011	Modelling of Rail Gun and Study of its Pulsed Power Supply System using Computer Simulation Techniques
Ms. Geetha Ramadas	Dr. T. Thyagarajan	08.08.2011	Studies on the Performance Enhancement of Induction Motor Drives using Soft Computing Techniques
Ms. K. Rajeswari	Dr. P. Lakshmi	11.08.2011	Development of Controllers for Vehicle Suspension System with Enhanced Ride Comfort

FACULTY OF INFORMATION AND COMMUNICATION ENGINEERING

Name of the Candidate	Name of the Supervisor / Joint Supervisor	Date of Oral Exam	Title of the Thesis
Ms. M.S. Anbarasi	Dr. K.M. Mehata Dr. S. Bose	21.02.2011	Enhanced K-Means Clustering for Patient Report Outcomes
Ms. K. Vijaya	Dr. H. Khanna Nehemiah Dr. A. Kannan	25.02.2011	An Intelligent Predictive Model for Knowledge Discovery from Clinical Datasets
Mr. A. Rajiv Kannan	Dr. K. Duraiswamy	04.03.2011	Multi Dimensional, Multi Directional, Geographical IP Traceback Mechanism for Defense Against Distributed Denial of Service Attacks
Mr. C. Balasubramanian	Dr. K. Duraiswamy	04.03.2011	An Innovative Temporal Data Mining
Ms. P. Meenakshidevi	Dr. K. Duraiswamy	04.03.2011	An Efficient Secure Reversible Authentication Watermarking with Tamper Localization
Ms. A. Jaya	Dr. G.V. Uma	23.03.2011	A Proagmatic Approach towards Automatic Story Generation and Reasoning
Mr. P.C. Kishoreraja	Dr. (Mrs.) M. Suganthi	23.03.2011	Efficient Approaches to Improve the Performance of Anomaly Intrusion Detection in Wireless Networks using MAC Layer and Network Layer Feature Set
Mr. R. Malmathanraj	Dr. S. Thamarai Selvi	26.04.2011	Study and Analysis on Reinforcement Learning and Biologically Inspired Algorithms for Interceptor Allocation

Name of the Candidate	Name of the Supervisor / Joint Supervisor	Date of Oral Exam	Title of the Thesis
Ms. Y. Ireaneus Anna Rejani	Dr. S. Thamarai Selvi	04.05.2011	Digital Mammogram Segmentation and Tumor Detection using Artificial Neural Network
Mr. S. Senthilkumar	Dr. S. Muttan	06.05.2011	Investigation and Development of Fusion Techniques using Night Vision Images through Statistical and Multi-resolution Approach
Mr. S. Saravanan	Dr. M. Madheswaran	12.05.2011	Some Investigations on Switching Activities of High Speed Low Power Multiplier for Integrated Circuit Applications
Mr. P. Rajendran	Dr. M. Madheswaran	16.05.2011	Implementation of Medical Decision Support System for Classification of Brain Tumor using Image Mining Techniques
Mr. J. Kamala	Dr. B. Umamaheswari	20.05.2011	IEEE 1451.0 Enabled Smart Control Architectures and Their Application to DC-DC Converters
Ms. S. Padmavathi	Dr. S. Mercy Shalinie	23.05.2011	Application of Heuristic Algorithms for Effective Task Scheduling in Cluster Computing Environment
Ms. A. Askarunisa	Dr. N. Ramaraj	25.05.2011	Agent based Analysis of Test Case Prioritization Techniques for Software Operations
Ms. M.K. Kavitha Devi	Dr. P. Venkatesh	25.05.2011	Development of Artificial Intelligence Based Collaborative Filtering Recommender Systems for Web Applications
Ms. T. Kalpa Latha Reddy	Dr. N. Kumaravel	03.06.2011	Texture Analysis of Jaw Bone CT Images for Characterization of Bone Quality
Ms. A. Grace Selvarani	Dr. S. Annadurai	08.06.2011	Certain Analysis on Content Based Medical Image Retrieval System using Shape, Texture, Semantic and Visual Features
Mr. P.M. Joe Prathap	Dr. V. Vasudevan	01.06.2011	Investigations on an Optimized Key Management System for Secure Multicast Communication
Ms. E.A. Mary Anita	Dr. V. Vasudevan	09.06.2011	Investigations on Secure On-Demand Multicast Routing Protocols for Manets
Mr. D. Rajinigirinath	Dr. S. Selvan	13.06.2011	Investigations on Efficient Data Dissemination in Vehicular Adhoc Networks
Ms. S. Rathi	Dr. K. Thanushkodi	20.06.2011	A Secure and Fault Tolerant Framework for Mobile IPV6 Based Networks

Name of the Candidate	Name of the Supervisor / Joint Supervisor	Date of Oral Exam	Title of the Thesis
Mr. T.D. Senthilkumar	Dr. A. Krishnan Dr. K. Duraiswamy (Supervisor in-charge)	24.06.2011	Nonsaturation Throughput Analysis of IEEE 802.11b Distributed Coordination Function under the Imperfect Channel Conditions
Ms. P. Chitra	Dr. P. Venkatesh	04.07.2011	Application of Heuristic and Metaheuristics to the Bi-Objective Task Scheduling Problem on Heterogeneous Distributed Computing Systems
Mr. P. Venkata Krishnan	Dr. R. Sukanesh	24.06.2011	Nonlinear Detection in Human EEG Signals using Higher Order Statistics and Spectra
Ms. N. Shanthi	Dr. L. Ganesan	08.07.2011	Some Studies on Security Issues in Multicast Mobile Ad-hoc Network
Mr. U.S. Ragupathy	Dr. A. Tamilarasi	08.07.2011	Investigation on Mammographic Image Compression and Analysis using Wavelets and Multiwavelets
Ms. D. Mohana Geetha	Dr. M. Madheswaran	11.07.2011	Some Investigations on Electrostatic Microbeam Actuators for Optical Switching Applications
Ms. G. Uma Maheswari	Dr. K. Ramar	12.07.2011	Analysis of Colour Texture Segmentation using Fuzzified Distance Metric and Symbolic Object Approach
Mr. A. Sabari	Dr. K. Duraiswamy	14.07.2011	Ant Colony based Reliable and Power Efficient Adaptive Multicast Routing with Multiple Constraints in Manet
Ms. V. Vijayakumari	Dr. N. Suriyanarayanan	15.07.2011	Certain Investigations on Image Processing Techniques for Early Detection of Diabetic Retinopathy
Mr. S. Prasanna Devi	Dr. K. Suryaprakasa Rao	19.07.2011	A Study on Improving Certain Pre-Transplantation Decision Issues Related to Kidney and Corneal Transplantation Programs
Ms. M. Subadra	Dr. V. Rajamani	05.08.2011	Hardware Reconfigurable Neural Network based Electronic Nose System for Early Diagnosis of Sterile Body Fluid Infections
Mr. C.N. Marimuthu	Dr. P. Thangaraj	08.08.2011	Certain Investigations on Power Optimization Techniques for Data Path Cells in DSP Blocks
Mr. K. Venkatachalam	Dr. P. Balasubramanie	08.08.2011	Certain Investigations on Effective Resource Utilization Techniues in Wireless Mobile Networks
Ms. M. Jagadeeswari	Dr. M.C. Bhuvaneswari	09.08.2011	Application of Evolutionary Algorithms for Partitioning in VLSI and Embedded Systems
Mr. V.K. Manoharan	Dr. V. Abhaikumar	12.08.2011	Design and Development of a Class of Fractal based Miniaturized Phase Shifters

Name of the Candidate	Name of the Supervisor / Joint Supervisor	Date of Oral Exam	Title of the Thesis

FACULTY OF SCIENCE AND HUMANITIES

Mr. C. Anand	Dr. M. Palanichamy	15.02.2011	Synthesis, Characterization and Catalytic Performance of Fe^{3+}, Ga^{3+} and $A1^{3+}$ Incorporated Mesoporous Molecular Sieves
Mr. S.K. Krishna	Dr. S. Senthilkumar	23.02.2011	Potential Use of Waste Jute Fibre to Reduce Organophosphorous Pesticide Contamination in Aqueous Solution
Ms. E. Poorani	Dr. M.K. Suseetharan	04.03.2011	A Novel Antitumous L-Asparaginase from Marine Streptomyces SP; Strain EPD 27 Identification, Purification, Characterization and Fermentation Kinetics of Enzyme Production
Mr. Kolluru Gopi Krishna	Dr. Survo Chatterjee	11.03.2011	Biochemical and Biophysical Characterization of Shear Stress Mediated Vascular Remodelling
Ms. S. Dhanalakshmi	Dr. M. Rajaram	17.03.2011	A Reliable and Secure Framework for Detection and Isolation of Malicious Nodes in Manet
Ms. R. Navamani	Dr. N. Murugan	18.03.2011	Numerical Study of Natural Convection in Square Cavities with Differentially Heated and Cooled Walls
Ms. R.V. Suganthi	Dr. S. Narayana Kalkura	22.03.2011	Investigations on the Crystallisation and Effect of Swift Heavy Ion Irradiation on Helical Hydroxyapatite
Mr. P. Samuel	Dr. S. Moorthy Babu	23.03.2011	Investigation on Rare Earth Ion Doped Solid State Laser Hosts: Single Crystals and Transparent Ceramics.
Mr. A. Selvaganapathi	Dr. P. Gnanasundaram Dr. M. Alagar	23.03.2011	Synthesis and Characterization of Organic-Inorganic Hybrid Epoxy Lavered Silicate/CNT Nanocomposites
Mr. V. Kathirvel	Dr. S. Moorthy Babu	31.03.2011	Correlation between Structural Stability and Electronic Structure of f-Electron Based Intermetallic Compounds under pressure
Ms. N. Suganthi	Dr. K. Srinivasan	07.04.2011	Evaluation of Phosphorylated Tamarind Nut Carbon for the Removal of Toxic Trace Metals from Aqueous System
Mr. S. Anand	Dr. B.S. Lakshmi Dr. R.B. Narayanan	11.04 2011	Insulin Mimetic Action of Aloe Emodin Glycosides from Cassia Fistula Stimulates Glucose Transport & Storage - An IN Vitro & IN Vivo Approach
Mr. T. Muthukumaran	Dr. S. Meenakshisundaram	11.04.2011	Functional Expression of Candida Antarctica Lipase in Recombinant Pichia Pastoris

Name of the Candidate	Name of the Supervisor / Joint Supervisor	Date of Oral Exam	Title of the Thesis
Mr. Ganesh Vattikondala	Dr. K. Baskar	21.04.2011	Synthesis and Characterization of Pure and Cobalt Doped Gallium Nitride Nanocrystals
Ms. M. Mubashir Unnissa	Dr. Y. Sarada	27.04.2011	Warranty Cost Analysis for Deteriorating Systems under Varying Environments
Ms. Lakshmi Janakarajan	Dr. B.S. Lakshmi	16.05.2011	Mast Cell Stabilizing Properties of Steroidal Alkaloids Isolated from Solanum Xanthocarpum : An Assessment of their Effects on Early and Late Phase Allergic Signals
Mr. K. Ashok Kumar	Dr. Hema Achyuthan	20.05.2011	Quaternary Paleoenvironmental Change using Planktic Foraminiferal, Geochemical and Mineral Magnetic Susceptibility Records from the ODP Site 758, Northern end of Ninety East Ridge, Indian Ocean
Ms. Hima Bindu Reddy	Dr. Suvro Chatterjee	20.05.2011	The Study of Hypoxia Implications in Endothelium
Mr. C. Ravichandran	Dr. J. Kumar	24.05.2011	Investigations on Solgel Grown Zinc Oxide and its Alloy Systems for Band Gap Variation and on the influence of Dopants on the Optical and Electrical Properties
Ms. A.V. Gayathri Devi	Dr. V. Rajendran Dr. N. Rajendran	25.05.2011	Optimisation of the Bioactivity of Different Bioactive Glass and Glass Ceramics for Biomedical Applications
Mr. S. Balamurugan	Dr. P. Kannan	01.06.2011	Studies on Electrically Switchable Bent-core Liquid Crystals for Molecular Switches
Mr. S. Guhan	Dr. D. Sangeetha	07.06.2011	Development of Blends and Composites of Speek as Electrolyte Membranes for Fuel Cells
Ms. P. Santhi	Dr. J. Jeyakodi Moses	10.06.2011	Study on the Application of Environmentally Suitable Reduction and Solubilisation Process for VAT Dyeing of Cotton Fabric
Mr. P. Ilanchezhiyan	Dr. R. Jayavel	15.06.2011	Investigations on the Preparation and Characterization of Pure and Rare Earth Doped ZnO Nanorods and Thin Films
Mr. K. Senthil Kumar	Dr. P. Gautam	15.06.2011	Studies on Mercury Transporter (merT) and Mercury Reductase (merA) Proteins
Mr. C. Venkataraju	Dr. K. Sivakumar	17.06.2011	Preparation and Characterization of Nickel Cadmium and Bismuth Substituted Manganese based Nanostructured Ferrites

Name of the Candidate	Name of the Supervisor / Joint Supervisor	Date of Oral Exam	Title of the Thesis
Mr. G. Sathishkumar	Dr. K. Sivakumar	17.06.2011	Structural, Magnetic and Dielectric Studies on Cobalt based Ferrite Nanoparticles
Mr. T.P. Srinivasan	Dr. R. Gopalakrishnan	20.06.2011	Single Crystal Growth and Characterization of Tartaric Acid Complexes and a, y - Glycines
Ms. Sharmila Sam	Dr. P. Kaliraj	20.06.2011	Enhancing the Immunoprophylactic Efficacy of a Filarial Vaccine Candidate Abundant Larval Transcript-2 by Lipid Modification
Ms. S.K. Kavitha	Dr. P.N. Palanisamy	27.06.2011	A Study on Semiconductor-Oxides Mediated Photocatalytic Degradation of Textile Dyes in Aqueous Solutions and Effluent
Mr. K. Thirumalai	Dr. P. Gautam	30.06.2011	Studies on Lipase from Aeromonas Veronii PG01
Mr. S. Tamilselvan	Dr. D. Arivoli	04.07.2011	Hard Templating Synthesis of Nanoporous Silicon Carbide (SC) with Different Structure and Morphology
Mr. M. Vinoba	Dr. M. Alagar	07.07.2011	Immobilization of Carbonic Anhydrase on Functionalized and Metal Nanoparticles Confined Mesoporous SBA-15 for CO_2 Sequestration
Mr. K. Muthukkumaran	Dr. S. Selladurai	07.07.2011	Characterization of Bulk and Thin Films of Some Doped Ceria and Zirconia based Solid Oxide Fuel Cell Electrolyte Materials
Mr. X. Joseph Raj	Dr. N. Rajendran	08.07.2011	Inhibition Effect of Thiadiazole, Piperidine and Oxadiazole Derivatives on Brass Corrosion in Natural Sea Water
Mr. Ajay Kumar Ray	Dr. R. Ramesh	15.07.2011	Biogeochemical Fluxes of Carbon and Nitrogen from Chilika Lake, East Coast of India
Mr. T. Suthan	Dr. N.P. Rajesh	20.07.2011	Growth and Characterization of Organic Single Crystals by Modified Vertical Bridgman Technique
Mr. K. Pushpanathan	Dr. M. Mahendran	22.07.2011	Martensitic and Magnetic Transformations in Polycyrstalline Ni-Mn-Ga Alloys
Mr. S. Edwin Gladson	Dr. k. Rajagopal	29.07.2011	Effect of Temperature on Thermodynamic Properties of Amino Acids with Electrolytes in Aqueous Medium

Name of the Candidate	Name of the Supervisor / Joint Supervisor	Date of Oral Exam	Title of the Thesis
Mr. M. Senthilkumar	Dr. R. Dhanasekaran	01.08.2011	Crystal Growth and Characterization of $La_2CaB_{10}O_{19}$, $Nd_xLa_{2-x}CaB_{10}O_{19}$ and $K_2B_4O_{11}H_8$ for NLO and Laser Applications and Theoretical Analysis of Nonlinear Optical Property of $La_2CaB_{10}O_{19}$ Crystal
Mr. P. Rajesh	Dr. P. Ramasamy	03.08.2011	Develop ment of High Quality Large Size Direction Controlled ADP Single Crystals and the Effect of Impurities on Their Growth
Ms. S. Shanthi	Dr. V.C. Ravichandran	27.07.2011	A Unified Model to Maximize Learning Through Best Practices in Knowledge Management
Mr. S. Kesavapandian	Dr. N. Victor Jaya	03.08.2011	Electrical Optical and High Pressure Studies on Some Transition Metals (Mn Fe, Co, Ni, Cu, Zn) and Ce-Doped SnO_2 Nanoparticles
Mr. R.D. Ethiraj	Dr. G. Kalpana	08.08.2011	Electronic Structure and Physical Properties of Alkali Metal Oxies and Chalcogenides and Magnetism induced by sp Dopants
Mr. K. Karthik	Dr. N. Victor Jaya	08.08.2011	Preparation and Investigations of Magnetic, Electrical and High Pressure Studies on Pure and Transition Metal Doped TiO2, CuO and NiO Nanoparticles
Ms. V. Sathya Selva Bala	Dr. S. Sivanesan	16.08.2011	Biodiesel Production from Vegetable Oils in Presence of Heterogenous Catalysts

FACULTY OF TECHNOLOGY

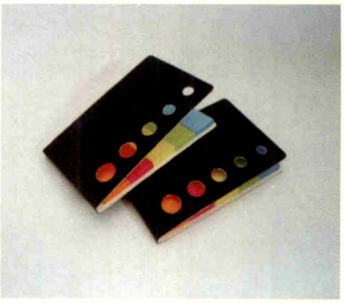
Mr. K. Senthil Kumar	Dr. V. Sivakumar	18.04.2011	Hydrodynamic Studies in Three-phase Fluidized Bed
Ms. V. Chitra Devi	Dr. V. Sivakumar	28.04.2011	Studies on Biodecolorization of Cibacron Reactive Dyes
Ms. Vemula Vani	Dr. M. Sivanandham	04.05.2011	Studies on Small Molecules that MMIC CD40 Ligand
Ms. M. Helen Kalavathy	Dr. Lima Rose Miranda	20.06.2011	Studies on Heavy Metal Removal from Aqueous Solutions and Effluent
Ms. Swarna V. Kanth	Dr. J. Raghava Rao Dr. Balachandran Unni Nair	23.06.2011	Studies on Biodegradable Tanning System based on Polyfunctional Aldehydes
Mr. K. Kannan	Dr. V. Sivakumar	08.07.2011	Hydrodynamic Studies on Three-Phase External Loop Airlift Fluidized Bed
Mr. M. Senthil Kumar	Dr. N. Selvakumar	11.07.2011	Studies on the Effect of Moisture Content on the Colour Appearance of Dyed Cotton Fabrics

Name of the Candidate	Name of the Supervisor / Joint Supervisor	Date of Oral Exam	Title of the Thesis
Mr. M. Dhinakaran	Dr. B.S. Dasaradan	18.07.2011	Modification of Polyester and Polyester Cotton Fabrics by Alkali Treatment
Mr. N. Venkatesh	Dr. N. Vedaraman	08.08.2011	Studies on Synthesis of Biosure Actants and their Applications

FACULTY OF ARCHITECTURE AND PLANNING

Mr. K.S. Rakesh	Dr. Abdul Razak Mohamed	04.05.2011	Evaluation of the Urban Pedestrian Environment : A Qualitative Approach
Ms. Indah Widiastuti	Dr. Ranee Vedamuthu	19.07.2011	Critical Study of Vernacular Settlement - Architecture of Kerala India and Minangkabau in West Sumatra, Indonesia (Of Societies Practicing Matrilineal Kinship)
Ms. G. Muthu Shoba	Dr. K. Rajagopal	12.08.2011	Acoustic Environment of School Classrooms in Warm-Humid Climates for better Learning

Post-it Notes



The 3M Company encourages creativity from its employees. The company allows its researchers to spend 15 percent of their time on any project that interests them. This attitude has brought fantastic benefits not only to the employees but to the 3M Company itself. Many times, a spark of an idea turned into a successful product has boosted 3M's profits tremendously.

Some years ago, a scientist in 3M's commercial office took advantage of this 15 percent creative time. This scientist, Art Fry, came up with an idea for one of 3M's best-selling products. It seems that Art Fry dealt with a small irritation every Sunday as he sang in the church choir. After marking his pages in the hymnal with small bits of paper, the small pieces would invariably fall out all over the floor.

Suddenly, an idea struck Fry. He remembered an adhesive developed by a colleague that everyone thought was a failure because it did not stick very well. "I coated the adhesive on a paper sample," Fry recalls, "and found that it was not only a good bookmark, but it was great for writing notes. It will stay in place as long as you want it to, and then you can remove it without damage."

Yes, Art Fry hit the jackpot. The resulting product was called Post-it! and has become one of 3M's most successful office products.

Source : **The Internet**

GOVERNMENT AND AFFILIATED COLLEGES

ADHIPARASAKTHI ENGINEERING COLLEGE

- **Papers Published**
  - **Mr. A. Babuponnusami and Mr. S. Velmurugan,** "Effect of Pore Size Distribution on Methane Storage at Low Pressure: Preparation of Activated Carbon for ANG Storage", International Journal of Research in Chemistry and Environment, Vol.1, Issue 1, pp. 135-141, July 2011.
- **Papers Published in Conference Proceedings**
  - **Prof. R. Mariappan and Mr. G. Prabhakaran,** "A Soft Computing Approach for Authentication and Security of Mobile Users", National Conference on "Soft Computing (SOFTCOMP'11)", 22-23 July 2011.
  - **Ms. N. Pappayee and Ms. S. Manimegalai,** "Fluorescence Spectral Behaviour of Paracetomol in Various Solvents", International Conference on "Biomedical Instrumentation, Engineering and Environmental Management", pp. 58-89, 22-23 July 2011.
  - **Ms. N. Pappayee and Ms. S. Manimegalai,** "Fluorescence Spectral Behaviour of Ciproflaxocin in Various Solvents", International Conference on "Frontiers in Pharmaceutical Chemistry and Biologics - An Interdisciplinary Approach", pp. 77-79, 29-30 July 2011.
  - **Prof. R. Mariappan and Ms. K. Mahalakshmi,** "Blind Navigation System using RFID and Ultrasonic Technology", International Conference on "Advanced Computing ICACT 2011", pp. 155, 29-30 July 2011.
- **Dr. J. Baskaran,** organized an AICTE sponsored National Technical Symposium on 14.07.2011 and 15.07.2011.
- **Dr. D. Sivakumar,** Department of IT, organized a National Seminar at the college on 20.07.2011 and 21.07.2011.
- **Mr. B. Prakash,** Department of CSE organized a programme "LOGIN 2K11" at the college on 22.07.2011.
- **Mr. M. V. Prabhakaran and Mr. S. Pradeep,** Department of CSE organized a National Seminar at the college on 27.07.2011

ARUNACHALA COLLEGE OF ENGINEERING FOR WOMEN

- AICTE, New Delhi, sponsored Industry Institute Partnership Cell (IIPC) was inaugurated on 25.06.2011 and Entrepreneurship Development Cell (EDC) was inaugurated on 06.08.2011.
- One-day Workshop on "Make Research Simple" was organized on 13.08.2011 for the Research Scholars. This programme was sponsored by Universal Professional Association, Nagercoil.

EXCEL COLLEGE OF ENGINEERING FOR WOMEN

- AICTE sponsored Staff Development Programme on "Wireless and Cellular Communication" was held at the college from 20.06.2011 to 01.07.2011. Mr. R. Vijayarajeswaran, Chairman, VI Microsystems Private Limited, Chennai, was the Chief Guest.

IDHAYA ENGINEERING COLLEGE FOR WOMEN

- Association of ECE-MANEA organised a Seminar on "Industrial Automation, PLC & SCADA" on 16.07.2011 at the college. Mr. S. Srinivasan from Prolific Systems & Technology Private Limited, Chennai addressed the delegates.

IDHAYA ENGINEERING COLLEGE FOR WOMEN
NATIONAL LEVEL TECHNICAL SYMPOSIUM
COMSPEC' 11

- **Mrs. Gandhimathi and Mr. A. Joseph Selva Kumar,** organized a Workshop on "FOSS (Free / Open Source Software)" for the CSE & IT Students of the college on 28.07.2011 and 29.07.2011.
- **Sr. A. Jenitta** presented a paper on "Medical Palmistry in Health Care Domain using Digital Image Processing" in Conference "TRENZINE-11" at Magna College of Engineering, Chennai on 19.08.2011.
- **Mrs. S. Dhanalakshmi and Mrs. P. Poovizhi** presented a paper on "Intelligent of Medical Image with Texture Information" in Conference "N3C - 2k11" at Aksheyaa College of Engineering, Kancheepuram on 20.08.2011.
- Computer Science Department organized a National Level Technical Symposium "COMSPEC '11" at the college on 27.08.2011. Er. S. Azad Mohammed, Siemens Information System, Bangalore was the Chief Guest.
- Science & Humanities Department organized an Orientation Programme "Winning Perspective" for Students and Staff Members at the college on 30.08.2011. 610 Students and 110 Faculty Members attended the programme.

IFET COLLEGE OF ENGINEERING

- **Ms. R. Bharathi** presented a paper on "An Advanced FACTS Controller for Power Flow Management in Power Transmission System Using IPFC" in the Regional Conference on "PACC 2011" conducted from 20.07.2011 to 22.07.2011.

- **Prof. J. Ash** organized a National Workshop on "Effective Placement Preparation" by Educational Consultant Mr. Jayaprakash Gandhi in the college on 17.07.2011 and 18.07.2011.
- **Dr. R. Maheswari and Mr. R. Sivakumar** presented a paper on "Customer Experience Management - Theoretical Concepts" in the Regional Conference on "Changing Perceptive in Business" on 26.08.2011.
- **Papers Published**
  - **Mr. M. Saravanan,** "Performance Analysis of Different Spreading Code in CDMA System Environment for Multi-user Adaptive SDR Environment", International Journal of Computer Science and Network Security, Vol.11, Issue 7, pp. 28-37, 2011.
- Ms. J.C. Vijayashree, Department of ECE organised a National Symposium "ITECH FEST - 2011" at the college on 28.08.2011.

K.S. RANGASAMY COLLEGE OF TECHNOLOGY

- **Dr. K.B. Jayanthi, Mr. R. Nandakumar, Mr. C. Rajasekaran and Ms. M. Nirmala** from the Department of ECE organised a AICTE sponsored National Seminar on "Pattern Recognition for Medicine: Knowledge Engineering Approach" from 20.06.11 to 01.07.11.

K.S.R. COLLEGE OF ENGINEERING

- **Mr. A.V. Balan** organized an Inaugural Function of Mechanical Engineering Association on 02.07.2011.
- **Dr. P. Senthil Kumar** organized a Guest Lecture on "Patent" on 02.07.2011.
- **Mr. K. Jothilingam and Mr. K. Selvaraju** presented a paper on "Managerial Economics" in a Faculty Development Programme from 04.07.2011 to 10.07.2011.
- **Mr. P. Rasagopal** organized a Guest Lecture on "Higher Education" on 06.07.2011.
- Memorandum of Understanding (MOU) was signed with ICT Academy of Tamilnadu for the purpose of "Skill Edge Training & Placement Program" on 06.07.2011.
- **Dr. C. Senthil Kumar** organized a Guest Lecture on "Entrepreneurship Development" on 07.07.2011.
- The following papers were presented in National Conference on "Recent Trends and Issues in Computation Research" conducted at Vellalar Institute for Management Studies on 15.07.2011 :

Mr. K. Pragadeswaran	"Web Based Referral Process"
Mr. S. Vimaladhithan	"Spider Robot with Data Mining of Gene Expression with Optimization Algorithm"
Mr. R. Muralidharan	"Object Recognition Using Image Compression".

- Awareness programme on "Aptitude & Motivation" was conducted from 15.07.2011 to 17.07.2011 for Engineering Students.
- **Mr. K. Sankar** organized a National programme on "SQL/ORACLE" on 16.07.2011.
- Training Programme on "Technical Skills" was conducted from 16.07.2011 to 17.07.2011 for Final Year MCA Students.
- **Mr. K. Venkateswaran** organized a Training programme on "Pro/E and ANSYS Soft Skills", on 21.07.2011.
- **Mr. A.V. Balan** organized an Inaugural Function of SAE Student's Chapter on 29.07.2011.
- **Ms. K. Jayasudha** organized a National Seminar on "Multimedia and Its Application with Mobile Technology" on 28.07.2011.
- **Dr. P.K. Subramanian** organized a Guidance Program for Civil Services Examinations on 29.07.2011.
- **Ms. S. Sapna, Mr. M. Pravin Kumar, Mr. B. Vijay Kumar and Mr. K. Ganesh Kumar** presented a paper on "Cisco Networking Academy-Retooling Workshop 2011" in Cisco Academy Mini Conference & Retooling Workshop on 29.07.2011.

- The following papers were presented in International Conference on "Advanced Computer Technology" conducted at JKKN College of Engineering and Technology on 29.07.2011 and 30.07.2011 :

Mrs. K.K. Savitha and Dr. C. Chandrasekar	"Load Aware Routing in MANET"
Ms. K. Jayasudha and Dr. C. Chandrasekar	"A Novel Usage of Data Mining in Routing of Data in Between Disconnected Nodes"
Ms. S. Sapna and Dr. A. Tamilarasi	"Prediction of Hidden Knowledge from Clinical Database using Fuzzy Techniques"
Mrs. P. Anitha and Dr. C. Chandrasekar	"Energy Efficient Routing Algorithm for Zigbee Using Cross Layer (CLZBRP)".

- **Papers Published**
  - **Mr. V. Ravi and Dr. K. Duraisamy,** "Effective Power System Stabilization Using Non-Dominated Ranked Genetic Algorithm", Global Journal of Researches in Engineering (General Engineering), Vol.11, Issue 5, Version 1.0, pp. 33-40, July 2011.
  - **Mr. V. Ravi and Dr. K. Duraisamy,** "A Survey on Power System Stabilization", Global Journal of Researches in Engineering (General Engineering), Vol.11, Issue 5, Version 1.0, pp. 29-36, July 2011.
  - **Mr. R. Gopalakrishnan and Dr. A. Krishnan,** "Study on Techniques for Combined Economic and Emission Dispatch", Global Journal of Researches in Engineering (General Engineering), Vol.11, Issue 5, Version 1.0, pp. 21-27, July 2011.
  - **Mr. K. Venkatesh Raja,** "Assessment on Assorted Hyperelastic Material Models Applied for Large Deformation Soft Finger Contact Problems", International Journal of Mechanics and Materials in Design, 2011.
  - **Mr. R. Venkatachalam,** "Effect of Constrained Layers on Vibrational Characteristics of a Composite Sandwich System - A Finite Element Based Critical Investigation", International Journal of Mechanics and Materials in Design, 2011
- **Dr. T. Palanisamy, Mr. M. Gunasekaran and Mr. R. Gopi** organized a One-Day National Workshop on "Precast Concrete Buildings in India" on 06.08.2011
- **Mr. K. Jothilingam** organized an All India Workshop on "Research Methodology for Teacher Scholars" on 18.08.2011 and 19.08.2011.
- **Mr. C. Pazhanimuthu** organized a National Conference on "Characterization of Dielectric and Thermal Properties of Zirconia Nano Fillers" on 19.08.2011 and 20.08.2011.
- **Ms. S. Aruna, Ms. A. Vanitha and Dr. A. Subramani** organized a ISTE Sponsored National Seminar on "Research Issues in Computer Science Performance Analysis of Ad-hoc Routing Protocols in Multicast Environment" on 30.08.2011.
- **Dr. V. Revathi, Dr. T. Palanisamy, Mrs. J. Tharamani and Mr. N. Sudharsan** organized a One-day Workshop on "Fundamentals of Ocean and Coastal Engineering" on 02.09.2011.
- **Dr. V. Revathi, Dr. S. Senthil Kumar, Mr. K. Sargunan and Mr. A. Alex Rajesh** organized a Two-day Symposiam on 28.09.2011 and 29.09.2011.

M.P. NACHIMUTHU M. JAGANATHAN ENGINEERING COLLEGE

- The ECE Department organized a Two-day Faculty Development Programme on "Lead the Change" on 08.07.2011 and 09.07.2011.

- Memorandum of Understanding was signed with M/s. Tessolve, Bangalore on 18.07.2011.
- Student Interaction Programme "MYSAAC" and Alumni Meet was organized on 23.07.2011.
- The Inaugural Function of Training & Placement Cell was conducted on 04.08.2011. Mr. B. Anbu Thambi, DGM, Government & Corporate Initiative, ICT Academy of Tamil Nadu, Chennai was the Chief Guest.
- Aptitude Training Programme was organized on 12.08.2011 and 13.08.2011.

M.P.NACHIMUTHU M.JAGANATHAN ENGINEERING COLLEGE
TRAINING & PLACEMENT CELL
INAUGURAL FUNCTION

- The EEE Department conducted the National Level StudentTechnical Symposium "ELECZY" on 17.09.2011.
- The Civil Engineering Department conducted the National Level Students' Technical Symposium - "TRENTECH'11" on 19.09.2011.
- The CSE Department conducted the National Level Technical Symposium on 20.09.2011.
- The Mechanical Engineering Department conducted the National Level Students' Technical Symposium - "MECHNOSPARK" on 20.09.2011.
- The IT Department conducted the National Level Technical Symposium on 24.09.2011.

SHANMUGANATHAN ENGINEERING COLLEGE

- A team of 15 students with First Year Chief Coordinator Prof. M. Shanmugam and Mr. S. Ebenezer Moses, Lecturer in English visited 5 villages namely Arasampatti, Meyyapatti, Enapatti, Pulivalam and Anaipatti, in Thirumayam Taluk and launched Consumer Awareness Programme by motivating the villagers to look for expiry date in all the commodities they buy, including medicine, manure etc., from 16.08.2011 to 20.08.2011. This programme was funded by the Pudukkotai Collectorate.

SHANMUGANATHAN ENGINEERING COLLEGE
ARASAMPATTI
DEPARTMENT OF ECE PROUDLY PRESENTS
A NATIONAL LEVEL TECHNICAL SYMPOSIUM
SPECTRA'
AUG 25 & 26-2011

- National Level Technical Symposium "Ezpansia'11" was conducted by the CSE and IT Department on 19.08.2011.
- National Level Technical Symposium "Spectra'11" was conducted by the ECE Department on 25.08.2011 and 26.08.2011.

S.K.R. ENGINEERING COLLEGE

- Department of Mathematics organized a Two-day Workshop on "Queuing Theory and its Application" on 24.06.2011 and 25.06.2011.
- The Association of Mechanical Engineering was inaugurated on 20.07.2011 at the College Auditorium. Sultanate of Oman was the Chief Guest for the inauguration and delivered a lecture on "BE PROJECT - A Road Map to Career Development".
- Value Added Course "Programming in C# and .NET" was inaugurated on 29.07.2011.

- Organized an International Conference on "Embedded Electronics and Computing System (EECS)" on 29.07.2011 and 30.07.2011.
- Department of Computer Science and Engineering organised a Guest Lecture on "Process Flows and Modeling in Enterprises" on 10.08.2011. Dr. Viswanth Kumar Ganesh from CHN/TCS was the Guest Speaker.

SRI ARAVINDAR ENGINEERING COLLEGE

- Memorandum of Understanding (MoU) was signed with Prolific Systems & Technologies Private Limited on 16.07.2011.
- The CSI Student branch was inaugurated on 23.07.2011. Mr. Meenakshi Kumar, Chairman, Puducherry State Council, Confederation of India Industry, inaugurated the branch. Mr. S. Nityanandan, Chairman of the college, presided.
- Memorandum of Understanding (MoU) was signed with National Institute of Technical Teachers Training and Research on 30.07.2011.
- A Seminar on "Intellectual Property Rights for Engineering Graduates" was conducted on 13.08.2011. Prof. Dr. K. Anbudurai, Director of Research, VELS University delivered a lecture. Dr. N. Manoharan, Director, Planning, Development and International Affairs, Anna University of Technology, Madurai was the Guest of Honour.

THE RAJAAS ENGINEERING COLLEGE

- One-day National Level Symposium "VARDAN'11" was conducted by the ISTE Student Chapter on 29.08.2011.
- One-day National Level Technical Symposium "Enceyanza-11" was conducted by the EC Department on 30.08.2011.

VALLIAMMAI ENGINEERING COLLEGE

- Department of Electrical and Electronic Engineering in association with IEEE Valliamma Student Branch conducted a National Level Technical Symposium "Emerge 11" on 09.08.2011 and 10.08.2011.

VELAMMAL INSTITUTE OF TECHNOLOGY

- Students of the college won the overall championship in District Level Athletic meet 2011-12 held at Velammal International School on 15.07.2011.

- Ms. T. Chitra, Final year student of Information Technology, won the First Prize (Rs.1 lakh) for her project titled "An Effective Approach to Detect Cancer using Kirlian Images" in "TECHKNOW 2011" on 19.07.2011. This award was instituted by All India Manufacturers' Organization (AIMO), Tamilnadu State Board in collaboration with Anna University, Chennai.

V.R.S. COLLEGE OF ENGINEERING & TECHNOLOGY

V.R.S. College of Engineering and Technology
(An ISO 9001 : 2008 Certified Institution)
Arasur, Villupuram District - 607 107.
Department of Computer Science and Engineering
ASsociation of COMputer Engineers
Inauguration of ASCOME
INDIAN SOCIETY FOR TECHNICAL EDUCATION (ISTE)
Sponsored Guest Lecture on
"Advanced Soft Skills"
Project Manager
Date : 12-08-201
Venue : Prof. C.R.R. Auditor

- Mr. P. Karunanidhi, Department of Information Technology, organized a Guest Lecture on "Technology Trends - 2011" at the college on 22.07.2011. Mr. Sairam Raju, Project Manager, Equadriga Software Solutions Pvt. Ltd, Trichy delivered the Guest Lecture.
- **Mr.G. Elango,** Department of Mechanical Engineering, organized a Guest Lecture on "Advances and Scope of Mechanical Engineering" at the college on 26.07.2011. Dr. A. Ayya Kannu, Director, Board of Apprenticeship, Ministry of Human Resource and Development, C.I.T. Campus, Taramani, Chennai delivered the Guest Lecture.
- **Mr.A. Subramanian,** Department of Electrical and Electronics Engineering, organized a Guest Lecture on "Design Aspects of Protection & Switch Gear in Power Plant" at the college on 10.08.2011. Mr. P. Samuthira Pandi, Senior Manager, Department of Control and Instrumentation, Bharat Heavy Electricals Limited (BHEL), Trichy delivered the Guest Lecture.
- **Mr.A. Vijay Vasanth,** Department of Computer Science and Engineering, organized a Guest Lecture on "Advanced Soft Skills" at the college on 12.08.2011. Ms. S. Mangayarkarasi, Project Manager, CMC Private Limited, Chennai delivered the Guest Lecture.
- **Mr. R. Raja,** Department of Civil Engineering, organized a Guest Lecture on "Construction Practices for Sustainable Development" at the college on 19.08.2011. Dr. S. Kothandaraman, Prof. & Head, Department of Civil Engineering, Pondicherry Engineering College, Pondicherry delivered the Guest Lecture.

Opportunity is missed by most people because it is dressed in overalls and looks like work.

~ Thomas A. Edison

The truth is that our finest moments are most likely to occur when we are feeling deeply uncomfortable, unhappy, or unfulfilled. For it is only in such moments, propelled by our discomfort, that we are likely to step out of our ruts and start searching for different ways or truer answers.

- M. Scott Peck

POWER OF WORDS

A group of frogs were travelling through the woods, and two of them fell into a deep pit. When the other frogs saw how deep the pit was, they told the two frogs that they were as good as dead. The two frogs ignored the comments and tried to jump up out of the pit with all their might. The other frogs kept telling them to stop, that they were as good as dead. Finally, one of the frogs took heed to what the other frogs were saying and gave up. He fell down and died.

The other frog continued to jump as hard as he could. Once again, the crowd of frogs yelled at him to stop the pain and just die. He jumped even harder and finally made it out. When he got out, the other frogs said, "Did you not hear us?" The frog explained to them that he was deaf. He thought they were encouraging him the entire time.

This story teaches two lessons:

1. There is power of life and death in the tongue. An encouraging word to someone who is down can lift them up and help them make it through the day.
2. A destructive word to someone who is down can be what it takes to kill him or her.

Be careful of what you say. Speak life to those who cross your path. The power of words... it is sometimes hard to understand that an encouraging word can go such a long way. Anyone can speak words that tend to rob another of the spirit to continue in difficult times. Special is the individual who will take the time to encourage another.

Source : **The Internet**

Prof.Dr.P.Mannar Jawahar, Vice-Chancellor, Anna University, Chennai, with Honourable Minister for Higher Education Thiru.P.Palaniappan at TNEA 2011 on 5th July 2011.

Prof.Dr.P.Mannar Jawahar, Vice-Chancellor, Anna University, Chennai, with the students of Anna University, Chennai, during the Independence Day Celebrations on 15th August 2011.